The Multiple Reserve Currency System*

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The emergence of floating exchange rates in the early 1970's, which proponents had long foreseen as eliminating the need for a reserve currency, has instead by the early 1980's created a virtual constellation of reserve currencies. The U.S. dollar is still at the center of the system. But orbiting around it now are two secondary reserve currencies, the Deutschemark and the yen, and three tertiaries, the Swiss franc, the pound sterling, and the French franc.[1] Not all of this is new. The roles of the pound and the French franc have simply decreased in emphasis and magnitude over the past decade. The others have been drawn into use alongside them as ancillary reserve currencies because the world's brief experience with totally "free" floating from March to June 1973 demonstrated that there was still a need for reserve assets in the system.

A spreading divergence of prices, output, trade, and capital flows among growing countries had by 1973 impelled the break-up of that system of exchange rate parities hinged to the dollar, which had for a quarter century provided a reassuring climate of stability for world trade and capital movements. After 1973 central banks needed multiple options among the assets held in their reserves in order to parallel in some degree the patterns of varying use among currencies that had already been developed by the private traders and investors of the world. The problem, as those alternative currency options have become increasingly available, is to

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[1] The ECU, first issued to the members of the European Monetary System in 1979, is not included since the assets "behind" the ECU are U.S. dollars and gold contributed by the members from their existing reserves, supplemented occasionally by holdings of the currencies of members that arise from swaps arranged for intervention purposes.

find some approximation or substitute for the conditions of comparative stability in exchange rates that had supported the unprecedented gains of the world economy from the late 1940's to the early 1970's.

In part, this seeking for stability on the part of national authorities and their central banks has been expressed through various approaches to managed exchange rates. The issues and obstacles in that effort are the subject of many other studies, including several by the Group of Thirty, and will not explicitly be examined further here. In part, too, the quest for stability has fostered creation of the European Monetary System (EMS), by members of the European Economic Community (EEC), with a "parity grid" maintained among the central rates of the participating countries. That is the subject of a brief paper by Dr. Rieke of the Bundesbank that is appended to this volume. In addition, while the SDR may be visualized by some as an eventual replacement for national currencies in serving the reserve asset function, any large scale shift in that direction may have to await much wider use of the SDR in the trading-payments transactions of the world at large.

The focus in this discussion will be on the implications of the increased use of other national currencies as reserve assets clustered around the dollar — implications both for the currencies and countries that are the object of this confidence, and for the functioning of the system as a whole. These implications will have to be seen in the context of the great enlargement and diversification of the extra-territorial markets that have developed in all of the reserve currencies, both the old and the new, outside the direct reach of their central banks. Moreover, some reference is also relevant to the potentialities of the IMF action taken in 1980 to redefine the SDR, reducing its "composition" from what had been sixteen currencies to include by a nice coincidence only those five currencies in the new reserve currency constellation which are also members of the Fund (i.e., excluding the Swiss franc).[2]

Three of the succeeding papers in this volume have been prepared by current or recent officials associated with the newer reserve currencies — the Deutschemark, yen, and Swiss franc. They present in greater detail the direct experience which each currency has undergone in the new setting. A fourth paper outlines a reverse pattern, that of "winding down" the reserve role of sterling. This introductory paper will, in addition to summarizing briefly what has happened to the overall size and composition of reserve assets, outline some system-wide aspects of what has happened thus far, and identify some broad questions for which answers will still have to be sought in the future.

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[2] The selection was actually made on the basis that these are the currencies of the five countries within the Fund which have the largest exports of goods and services; their reserve status was not an explicit criterion.

1. The Growth of Multiple Reserve Currencies

A national currency does not become a reserve currency through a simple act of will by the monetary authorities of the country involved; indeed the Swiss, German, and Japanese authorities have resisted, even thwarted, such developments for years as the central banks or financial institutions of other countries tried to acquire holdings of Swiss francs, or Deutschemarks or yen. The originating force has come from the world marketplace. But until the monetary authorities of the three newest reserve currency countries began to acquiesce to the market's advances, reserve accumulations in these currencies were a very small part of the world total.

Once begun, the scale accelerated rather quickly. Total foreign exchange holdings in the reserve assets (i.e., excluding gold and SDRs[3]) reported to the IMF by its members, by any of several measures[4], nearly tripled from the end of 1973 to the end of 1980, stimulated dramatically by the accumulation of OPEC surpluses. Over that same period, while the size of reserve holdings of dollars continued to increase, the proportion of dollars in total official holdings of national currencies (excluding gold and SDRs) shrank from 85 percent to 75 percent. Sterling's share was halved, from about 6 percent to 3 percent. The French franc remained about 1 percent. The newer reserve currencies rose: the Deutschemark, from under 7 percent to 13 percent; the yen, from zero to almost 4 percent; and the Swiss franc, from under 2 percent to about 4 percent. Meanwhile, of course, SDRs had also entered the reserve system and by the end of 1980 member holdings of SDRs were about 4 percent of the total non gold holdings included in reserve assets.

The growing totals and changing composition of reserve assets held in foreign exchange have been in part propelled by the growth of the extra-territorial markets for currencies. While primarily serving the payments and credit needs of the banking and trading sectors of the world economy, these markets (perhaps most conveniently subsumed under the one heading "Euro-markets") have also attracted many central banks.

One measure of the uses made of these markets for ordinary commercial and financial purposes is provided by various estimates of banking claims in the Euro-markets. These figures, as would be expected, now dwarf the scale of all central bank reserve assets in those same currencies

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[3] At the end of 1980, total reserves reported by the IMF were SDR 755 billion, of which 57 per cent was in gold (valued at the current market price), 4 per cent in SDR and IMF drawing rights, and the remaining 39 per cent in national reserve currencies.

[4] The complexities, risks of double counting, reporting inaccuracies, and other hazards encountered in tabulating total reserves are described in various notes accompanying the more detailed tables in succeeding papers. Generalizations here are limited to approximate magnitudes and directional movements.

by a factor of about three-to-one, even allowing for much double counting. Interestingly, the private sector seems to have led the central banks in diversifying out of dollars. At the end of 1973 the dollar accounted for about three-quarters of all holdings in banks in the Euro-markets — holdings that then represented a somewhat smaller total than the aggregates of all domestic assets or liabilities in the domestic banking systems of those same currencies. By the end of 1980, the dollar's share had shrunk closer to two-thirds of these now immense Euro-markets; the Deutschemark had become nearly one-sixth; and the Swiss franc accounted for slightly less than half of a remainder that included yen, sterling, French francs, and Dutch guilders.

Central banks, though understandably trailing far behind in diversifying out of dollars, were not all content to keep their diversified holdings of reserve assets located within each of the reserve currency countries. The Euro-market holdings of central banks, reported by the Bank for International Settlements (BIS), have also been increasing rapidly (more rapidly in other currencies than in dollars, although the dollar was still about two-thirds of total official holdings in the Euro-market at the end of 1980). As a proportion of total official holdings in dollars, Euro-dollars were about one-third at the end of 1980, while the proportion of Euro-Swiss francs in the total of central bank foreign exchange reserves held in that currency was about four-fifths; for the Deutschemark, about half; for sterling, one-fifth; for yen, one-tenth; and there were no appreciable reserve holdings in French francs outside France. Moreover, since the reserve centers themselves keep virtually all of their reserve holdings in official balances with each other[5], and since their holdings of dollars are still very large, the distribution of holdings by non-reserve central banks is more widely diversified than these proportions would imply.

2. The Purposes and Functions of Foreign Currencies as Reserves

Although currencies acquire official reserve status only when they are held by other central banks, they approach that role by becoming more widely used in the trading-payments activities of the commercial world. Sterling and the French franc became reserve currencies when London and Paris were the centers of large empires, in which trade was largely conducted in the "mother currency," and countries outside found it convenient also to trade in such widely used currencies. As those originally

[5] The United States does not generally, however, hold significant amounts of any of the other currencies; its international reserves are still largely in gold, but also include IMF drawing rights and SDRs.

dominant positions declined, the center of currency gravity shifted toward the currency of the strongest economy with the greatest trading potential, the dollar. And it has been the resurgence of the German and Japanese economies since World War II, while the great growth of the entire world economy was diminishing the relative predominance of the American economy, that has created the need for the Deutschemark and yen as additional trading-payments currencies. The Swiss franc, of course, although not representing an equally powerful economy, has combined the servicing of highly specialized domestic industry with unique facilities for providing financial security to investors outside Switzerland.

In effect, the world has become too big and complex to have its trans-national payments needs met almost exclusively by one currency, even if U.S. policies had been impeccably reassuring to confidence. The consequences, when variations in the paces and prices of other countries made it impractical for them to keep pegging their currencies to the dollar, have been wide and frequent fluctuations in their exchange rates against the dollar. The traders and bankers of the world have, therefore, had to diversify the currencies they use; and their central banks have followed in the currencies they hold as reserves. The risks had become too great in relying on only one currency as a store of value or for settling balance of payments drains or gains; various combinations of central bank currency holdings have been the result.

The outcome has not, however, been the development of a full array of equally usable reserve assets. The other currencies are, in scale of holdings or in versatility of uses, likely to remain in secondary or tertiary roles for some time to come because they are unlikely to match the dollar as a transactions currency any time soon. As several of the later articles point out, a fully adequate international reserve asset should be a medium of exchange, a standard of value, and a store of value — not only for other central banks, but also for the traders and bankers of the world.

The dollar, of course, in some degree serves all three purposes for both classes of holders, that is, for the commercial-financial world and for central banks. All of the other currencies serve as a medium of exchange, in the sense that the markets and other central banks use them in foreign exchange trading, but usually (outside the EEC) the trading in other currencies is against dollars rather than against each other. As standards of value, the reserve asset currencies are used more in the invoicing of exports from the home country than in imports; but as Dr. Matsukawa outlines so clearly for Japan, none of the new reserve currencies are widely used in invoicing among third countries. As stores of value, however, all are increasingly used as part of the diversification process, both in the private markets and by central banks; but such holdings are, of course, highly susceptible to

interest rate spreads, to shifts in confidence, and to changing exchange rates. It is indeed in this last respect that a multiple reserve currency system, in a world of flexible exchange rates, not only amplifies the potentialities for instability, but perhaps paradoxically may also offer opportunities for a stabilizing equilibrium.[6]

3. Is a Multiple Reserve System Stable?

Conceptually, as foreseen in academic analyses confined to the movement of goods in trade, a system of floating exchange rates would be expected to produce an equilibrium of reasonable stability among all currencies, which should be readily interchangeable at freely determined market rates of exchange without any need to use one or more reserve assets as a common frame of reference. In practice, partly because of those same wide differences in price, production, and trade behavior among countries that made floating inevitable, since the early 1970's there have been remarkable exchange rate swings of 15 to 50 percent over relatively short periods, even among currencies of the most developed countries. "Overshooting" and "bandwagon effects" have become common parlance in the exchange markets.

Out of this experience come two key questions: (A) has the emergence of a variety of reserve currencies, which the very existence of floating helped to induce, created a built-in aggravation of the volatility already associated with flexible exchange rates, which may have a dampening effect on world trade? and (B) will frequent shifts into or out of a given reserve currency, either by the commerical world or by other central banks, create new obstacles to the desired management of a country's domestic monetary policy, possibly leading to greater economic instability? And beyond these lies another question: (C) will the existence of several different reserve assets permit or encourage a larger volume of reserves overall, perhaps resulting in excess liquidity creation for the world as a whole, and greater worldwide inflation? The record thus far does not provide a clear answer to any of these questions, but it does suggest a presumption that will need testing over a longer period.

A. Exchange Rate Volatility of the New Reserve Currencies

As to volatility, all three of the new reserve currencies have shown wider fluctuations than the non-reserve currencies over the period since central

[6] The SDR remains of limited use as a reserve asset because it has not yet found a way to enter the foreign exchange markets. It is, however, being increasingly used both as a standard and as a store of value.

bank holdings of each currency began a decisive rise. For the Deutschemark, the sharp rise in reserve holdings began near the end of 1975; for the Swiss franc, the end of 1976; and for the yen, the end of 1977. All three currencies were on a rising exchange rate trend against the dollar in the initial stages of the surge in their use as reserves. Each has (along with sterling) experienced cumulative upward swings, since the inception of large holdings as reserves, in magnitudes of 50 percent against the dollar, with correspondingly steep declines. Except for the Dutch guilder, linked closely to the Deutschemark, no other major currency has experienced oscillations as large.

For short periods, there has also been a noticeable increase in volatility, although the contrast with other currencies is less pronounced. In terms of standard deviations of change against the dollar on a monthly basis, the Deutschemark did not show much change until 1978; but the volatility of the Swiss franc and the yen shot upward quite clearly as their use as reserves accelerated. This shorter term volatility did not appear, moreover, to be linked to short term changes in domestic interest rate fluctuations in any of the three countries, since interest rate volatility did not change appreciably while the exchange rate volatility was rising.[7]

If there should be continuing evidence of greater volatility among the newer reserve currencies, the crucial question, of course, is whether or how this matters — either for the reserve currency countries themselves or for the more general growth of world trade and payments. The record is too short — and too much intermingled with such extraordinary economic events as the remarkable rise of U.S. interest rates and the dollar in 1980 and 1981 — to permit more than gratuitous inference. The fact that gross intervention through the sale or purchase of these reserve currencies by their central banks approached an equivalent of $100 billion from 1976 through 1980 suggests, however, some interest in dampening fluctuations in the exchange rates of reserve currencies — fluctuations which presumably would have been even larger without the intervention. Whether or not there has been a related constraint on the expansion of world trade cannot as yet be determined. It is suggestive, however, though no doubt related to many other adverse developments, that the real volume of world trade reported by the IMF (including estimates for non-members) rose at annual rates of only 4.6 percent from the end of 1976 to the end of 1980, while it

[7] Had there been a closer correspondence with domestic interest rate fluctuations, or with spreads between those interest rates and comparable rates in the United States, there would have been a stronger presumption that the exchange rate volatility resulted simply from the action of the private market — in contrast with the inference here that a currency's reserve asset role (and the prestige thereby associated with its more widespread use) contributed a special impulse toward its exchange rate volatility.

had grown at average annual rates of 8.5 percent from 1962 to 1972, and at 5.9 percent from 1972 through 1976.

The introduction of the EMS and its ECU in 1979 is also suggestive evidence that constraint on the fluctuation of other EEC currencies against the Deutschemark is considered important as a stimulus to trade within the European Community. The analogy is limited, though, since the EEC countries actually negotiate their central rates with each other, making changes in response to shifts in the overall economic relations among themselves. The comparison with any intervention undertaken by other central banks, and outside the EEC context, is only relevant to the extent that the intervention by EEC countries in the exchange markets serves to minimize fluctuations that do not signal a need for explicit changes in the central rates. It would, of course, be futile and wasteful for other central banks to attempt through currency market intervention to establish exchange rates which their underlying economic conditions would not support. However, the withdrawal of the United States itself from active intervention, after its short-lived initiative from November 1978 until early 1981, may open the exchange markets in the other reserve currencies to more volatility, with its uncertain consequences, over the period ahead.

B. Reserve Currency Repercussions on Domestic Monetary Management

During the quarter century of the dollar's hegemony, envious criticisms were often pointed toward the presumed advantage which the dollar's role gave the United States — that is, an "automatic" financing of deficits without discipline. Whether or not that criticism may have been valid at times, there seems little likelihood that the same concept could be extended to the new reserve currencies. The simple fact that there are several reserve currencies clearly exposes each reserve currency to the continuous risk that other central banks will shift holdings among them. That is emphasized by the fact that a dominant aspect of the reserve currency role of each, at least thus far, is to serve as an investment currency, and that shifts by central banks or others can occur through the Euromarket even when domestic capital markets are narrow, or underdeveloped.

The consequent exposure to the critical surveillance of other central banks offers far less potential for sustained financing of deficits through increased distribution of a particular reserve currency than any scope which might once have been afforded the United States. For during the dollar's quarter century, the only options for other central banks were to shift into sterling or French francs — opportunities not often taken — or to acquire gold, an option that was increasingly constrained by their reluctance to

drain away U.S. gold stocks. (Although tacit United States resistance to gold sales became stronger in the later 1960's, its gold holdings were nonetheless reduced by more than one-half from 1950 to 1970.)

Whatever degree of "immunity" may have been available to the United States for financing external deficits, the most likely exposure of the new reserve currencies is of a quite different nature. Because of the persistent instabilities that influence interest rates and exchange rates, there will frequently be situations in which business-financial holders of currencies will be shifting from one reserve currency to another -- in order to improve yields, seek an exchange gain, or minimize risk. Whether or not such shifts are also made on any sizable scale by central banks, any one of the new reserve currencies must expect from time to time to be the recipient from the market of substantial inflows, or the object of outflows, of cash balances or investment funds. It cannot plan indefinitely on retaining increased amounts of foreign holdings as reserve financing of its deficits.

Whenever inflows go directly into the domestic economy, they tend not only initially to raise the exchange rate of the receiving country, thereby penalizing its exporters, but the result will also be to enlarge the reserve base available to its domestic banking system. If conditions do not call for expansion of domestic money and credit, the central bank may have to try to absorb the increased domestic bank reserves or otherwise attempt to sterilize the inflows, through domestic market operations or swaps with its banks. That conceivably may also tend to raise domestic interest rates, perhaps attracting even more funds from abroad, and repeating the pattern. Whether or not such action may coincide with a current account deficit (or surplus) of the affected country may be quite accidental.

The position may be clearly perverse if the flow into a reserve currency occurs only in the Euro-market. If a currently unwanted strengthening of that currency's exchange rate should then be countered through offsetting sales by the central bank of its own currency in that market, directly or through swaps with its banks, the result must almost inevitably be to add to holdings of dollars in its own reserves (because the dollar is nearly always the currency of convenience on the other side of such sales). The central bank may then face a need to sterilize those reserves domestically.

The opposite situation may be equally disturbing, when holders, whether central banks or in the private market, move out of a reserve currency. When the outflows come from domestically lodged funds, for example, there is an immediate drain on the internal reserve base. If that drain and the resulting decline in the exchange rate occurs because of general outside concern over the particular country's performance, the implied discipline may be appropriate. But holders can decide to move for so many other reasons, including the sheer speculation that another re-

serve currency appears likely to offer exchange (and/or interest rate) gains, that the local monetary authorities may find themselves impelled to take offsetting action against withdrawals, through further deliberate tightening of money and credit, and the inducing of higher interest rates, even at a time when the economy is sluggish or declining and instead needs domestic central bank support.

There are many other possible scenarios, both in the home economy and the Euro-market. The common element, however, is that countries whose currencies serve as international reserve assets acquire an added dimension of exposure, beyond that associated with the currency movements which accompany the goods and capital flows of other countries. Not only may this mean wider fluctuations in the exchange rates of the reserve currency countries, but also the reserve flows themselves may at times be so volatile, and so disruptive for the home economy, as to force the affected central banks to accept wider (or perverse) swings in interest rates or the money supply contrary to the aims of their domestic policies. A case study of the ways in which reserve currency status has in the past aggravated domestic problems and inhibited domestic economic management for sterling is presented in the paper by Deputy Governor McMahon. The more recent experience of the Swiss National Bank, as described by President Leutwiler and Dr. Kästli suggests that whatever the cause, or source or destination of the inflows or outflows, the added attractiveness of reserve currencies seems to create added complications for the execution of domestic monetary policy.

C. The Inflation Potential of a Multiple Reserve System

The apprehension that a multiple reserve system would be prone to excess liquidity creation, leading to persistent inflationary pressures across the world, has been prompted by two concerns. One is that since an excess of world reserves seems to have been created by the United States when its overall balance of payments was in deficit, the risks of such excesses may be compounded when several countries are in a position to finance external deficits through international money creation. A second concern is that, without implying abuse of their role by any of the reserve currency countries, the routine operation of the system may produce reserves and currency (at home and in the Euro-markets) that expand on an aggregate scale determined by the world's nominal (rather than real) "needs of trade." The 19th century British debate between the currency and the banking schools, as to the circularity of this kind of process, may in this new context reappear with worldwide relevance. That is, in a multiple reserve system there is no overall "governor" to set limits on what may otherwise add up to very large and potentially inflationary aggregate reserves and currencies for the world

as a whole. The system may become as loose as some domestic economies have been before becoming subject to the overall constraint of a central bank.

As to the first concern, the existence of alternative reserve currencies may create a virtual automatic check on any tendency for one reserve currency country to depend upon the acceptability of its currency by others as a means of financing its own balance of payments deficits. Central bank holders of any reserve currency now have a ready opportunity, if the economy supporting that currency begins a profligate course, to shift to another reserve currency. There is no doubt that the officials of the central banks in the new reserve asset countries are already aware of the pressures that may be created through outflows from their currencies, just as they are also conscious of the difficulties for domestic monetary management that may be created by enlarged inflows.

The second concern is that the "natural" growth of reserves (including holdings in the Euro-market) may in the aggregate become excessive, and promote a vicious circle of inflation — i.e., higher prices lead to higher commercial needs, which lead to larger uses of credit and related money creation, and these in turn lead on to higher reserves. So stated, this concern becomes another version of the "engine of inflation" problem, pointing to the perennial question as to how large the world's reserves should be, how rapidly they should grow, and under what kind of overall limitation. It was uneasiness over the growth of dollar reserves, and the processes through which they were created, that caused the IMF to propose the SDR as an alternative. As yet, of course, SDR creation has not become a significant factor influencing the total of world reserves and liquidity.

There may indeed be some interaction between this process and the unprecedented growth of worldwide inflation since the early 1970's. The oil financing problem in particular generated large and unanticipated demands for credit, much of which was financed through new money in the Euro-market. Although that flexibility has avoided, thus far, the crisis that once seemed threatening, it may also symbolize a potential problem of an excessive (through quite unintended) generation of money and reserves through a multiple reserve system in the future. Admittedly, both the central banks and the commercial-financial participants in the Euro-market have until now considered any overall controls impractical and unnecessary. And while there is no conclusive evidence of danger yet, the possibility does deserve continued surveillance.[8] Any corrective action, if and when appropriate, will surely require a close collaboration among the reserve currency

[8] For example, a study group of the Group of Thirty, chaired by John Heimann and Geoffrey Bell, is examining the broad issue of international banking risks.

countries and the IMF to determine what kinds of joint action can most effectively be taken.

4. The Prospects for a Stable Equilibrium

The readiness with which currency holdings may be shifted from one reserve asset currency to another, while it may serve to check tendencies toward an undue expansion of liquidity in individual reserve currency countries, also does expose each reserve currency to more sizable inflows and outflows than would occur if it played a much less prominent role within the system. Because there is always a possibility that events will cause holders to wish to converge on one or two currencies, while withdrawing from the others, there is an inherent risk of wide fluctuations, possibly of violent instability. As experience grows with the existing constellation of reserve countries, increasing attention will probably be given to ways of minimizing large disturbances among the reserve currencies. While it would be too much to hope for stability comparable to that of a constellation in the firmament of outer space, the aim presumably must be for a kind of relative stability among the reserve currencies.

There are at least three ways in which some approach to reducing instability might be developed: (A) coordinated intervention in the currency markets; (B) closer harmonization in economic policies and performances among the reserve currency countries; and (C) expanded responsibility by the IMF for the five reserve currencies now represented in the valuation of the SDR.

A. Coordinated Intervention

While intervention alone can rarely if ever be sufficiently powerful to determine and maintain an exchange rate, intervention techniques have already demonstrated a capacity to moderate those extreme swings which may carry a rate well beyond any reasonable zone of sustainable viability. All five of the other reserve currencies have, since 1961, participated in the "ring of swaps" initiated by the United States. During the first decade, these facilities were used extensively in the effort to defend and maintain fixed rates of exchange. Once floating became inevitable, that earlier experience provided a very useful base from which to cope with aberrations in the new system. A body of understanding has begun to develop concerning the degree to which swap lines can suitably be used to help check extreme swings, in conditions where there would be general recognition among the authorities involved that a currency was "overshooting."

The development of an underlying body of understanding among all the reserve countries has, of course, much further to go. Any incipient consensus is susceptible to periodic interruptions such as that most re-

cently announced by the United States, but even the U.S. position of virtually total withdrawal initiated in March 1981 has begun within a few months to be relaxed as the new Administration participated further in the kinds of international consultation in which the leading countries have come regularly to engage concerning their balance of payments positions and their interest in currency intervention. Perhaps it is not impossible to foresee the development, over time, of a sharing of analysis and expertise in ways that will produce very tentative ideas as to ranges or "target zones" for the matrix of exchange rate relations among the six reserve currencies — or at least among the dollar, the Deutschemark, and the yen. Such consultation might lead to clearer recognition of ways in which conflicting tendencies in the basic economic policies and performances of these countries could be in some degree ameliorated. Possibilities of this kind would at least seem to merit continual evaluation, in light of the susceptibility to volatility that seems inherent in the multiple reserve system.

B. Approaches to Harmonization among Economic Policies and Performances

Of necessity, there will always be differences among nations in their economic and social objectives, as well as in their resource availabilities for meeting them. This means that it would be quixotic to hope for actual coordination of economic action among all of the reserve currency countries. Even fulfillment of the objectives set for the European Economic Community — a more nearly homogeneous group of countries — seems remotely distant. Yet it is important for the reserve currency countries to continue working toward common understanding of each other's goals and capabilities. Although beginnings have been made within the OECD, for example, and through the various summit meetings among national leaders, no sustained focusing on such objectives has yet been achieved. As the reserve currency countries come more and more to experience the vulnerabilities which they jointly share, however, the impetus toward greater harmonization among their economic policies as they interact upon each other will surely become stronger.

Short of coordination, even to aim for programs only of collaboration, if attempted on a comprehensive basis, would no doubt prove counterproductive. But there is more promising scope in singling out from time to time those particular issues of common national interest on which a closer degree of harmonization of action might be achievable. Clearly the overriding significance of energy has already made it a centerpiece for the kind of consultation, and for some limited degree of cooperation, that should be the aim of the reserve currency countries. Time may show that the emergence of a multiple reserve system has created a stimulus toward

actions that can lessen economic oscillations in and among the key countries in the non-Communist world.

C. Expanding the Involvement of the IMF

Through its consultation procedures and its continuing analysis of the economic performance of its individual members, the IMF is in a position to contribute toward improving both the uses of market intervention and the efforts for harmonizing economic policies among the reserve currency countries — although it has not as yet shown a readiness to do so. Within the structure of its own operations, in addition to its consultations, the IMF also has interesting potentials. For example, to the extent that a central bank has conducted intervention by drawing upon swap lines, only to discover that it has been incorrect in expecting an early reversal of exchange rates that would permit retirement of the swaps, drawings of the Fund can provide a useful means, alongside direct borrowing arrangements among the reserve currency countries, to carry any imbalances that continue for a somewhat longer period than originally foreseen.

At some stage, too, the IMF might (perhaps should) develop a capability for closer surveillance and advice on some of the mutual questions which the reserve countries face in determining guidelines and procedures for intervention in the foreign exchange markets. That would be a logical furtherance of the Fund's new Article IV, which gave it the task of maintaining firm surveillance over the exchange rate policies of its members.

There may also be a broader role for IMF participation in, or encouragement of, various kinds of contingency planning. Those could well center on arrangements designed to buttress the financial strength or help lessen the instability of one or more of the reserve currencies in the face of cataclysmic events, including the possibility of everything from natural calamities to military action to speculative panics. Such arrangements would be a simple extrapolation from the concepts that underlay the organization of the Group of Ten in 1961. The Fund should also quite naturally be drawn to a special relationship with the reserve currency countries because all of its own liabilities are stated in SDRs, which in a very meaningful sense are related to the prospects for the countries whose currencies determine the value of the SDR.

The Fund also is best placed to keep close watch on the possibilities that might lead the multiple reserve currency system to become a stimulus to inflation — either as an individual currency might over-expand, or as the system as a whole might generate a spiral of liquidity creation in response to the "needs of trade." Both in signaling incipient problems, and in convening countries to develop effective responses, the IMF can, and in time should, take a strong initiative. Moreover, the leverage of its own drawing rights

could be used to help support corrective action, if such action should be found necessary.

If the Fund should have as an objective that of diagnosing and proposing actions for lessening instability among the reserve currency countries themselves, it would surely thereby also strengthen prospects for reasonably steady growth by all members of the IMF. That may mean at times that the Fund could serve as an arbiter or intermediator, helping to resolve some of the kinds of differences that inevitably arise among the reserve currency countries. Beyond that, the Fund might be asked to take a special responsibility for restraining or assisting any one of the five reserve currency countries if, in the broader judgment and interest of the others, some independent action or counsel is needed.

Looking even further down the road, thought should be given to the possibility that at some stage the world could again return to the comparative stability of a single reserve asset, with that asset being the SDR. A very early and limited step in that direction might be taken through redesigning an implementation of the Substitution Account, perhaps for all of the reserve currencies. In these various ways, and no doubt in many others, the emergence of the new multiple reserve asset system has clearly added, at least potentially, both to the responsibility and the opportunity for the IMF to exercise an effective role in the guidance of the world economy.

The Development of the Deutschemark as a Reserve Currency

Wolfgang Rieke

1. The Factors Leading to the Deutschemark's Emergence

The emergence of the Deutschemark as the second most prominent reserve currency owes much to the same factors that years earlier led to the predominant role played by the dollar (and sterling) as an international currency; but there are also some distinguishing features which deserve mention. Among the *common features* are

- the perennial German current account surplus (up to 1978) and the Deutschemark's soundly based strength in the exchange markets;
- the liberal trade and payments regime in force over many years;
- the steady expansion of Deutschemark denominated assets held by private non-resident investors;
- the growth of indebtedness denominated in Deutschemark by both private and official foreign borrowers (due in large degree to the openness of the German capital market except for short periods, as well as the existence of a free Euro-Mark-market).

Among the *distinguishing features* are

- the relatively minor role — compared with the dollar and even sterling — played by the Deutschemark as a transactions currency in world trade and payments (excepting German foreign trade, of which a substantial share is denominated and settled in Deutschemarks);
- the lack of a suitable range of instruments for the placement of liquid funds in domestic financial markets;
- the long-standing official preoccupation with the undesirable implications of short-term capital inflows for monetary policy (mainly to the

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German corporate sector, but in recent years increasingly also to the domestic banks, though the latter tended generally towards a maturity range beyond four years);

— the related official resistance against the Deutschemark assuming a reserve currency role through various measures prohibiting the sale of short-term financial assets to non-residents, including monetary authorities.

While the "common features" have clearly favored the Deutschemark's emerging role as a reserve currency, the "distinguishing features" have probably tended to discourage, and somewhat delay, that role at least to some degree. However, excessive dollar creation and American "benign neglect" of the dollar as a store of value for private and official dollar holders have increasingly rendered such obstacles ineffective, or encouraged their circumvention by various routes, especially that offered by the Euro-markets.

Even in the recent phase of a sharp swing from current account surplus into deficit and the consequent weakening of the Deutschemark's exchange rate the Deutschemark's reserve currency role was left unimpaired. Statistical evidence firmly supports this view at least for 1980. For 1981, when the German balance of payments situation began to improve again, no firm conclusions are possible. The Deutschemark's greater underlying stability (in terms of relative inflation rates) was reasonably maintained despite strongly adverse terms-of-trade effects; at the same time there continue to be uncertainties about the dollar's prospects (and those of other potential or actual reserve currencies). While official Deutschemark holdings declined in some cases, large reserve accruals to major OPEC surplus countries continued to favor diversification, and the mark has remained at least a partial "beneficiary". In addition, there was a renewed strong inflow of private capital into Germany on a gross basis while the expansion of the external Deutschemark markets slowed down.[1]

2. A First Stage

In a first stage of the emerging reserve role of the Deutschemark the interplay of the various "features" mentioned above and other factors encouraged diversion of the official demand for liquid mark investments to the Euro-market. The very nature of the Euro-market as an international money market made it responsive to new demands as they arose. Viewed from the side of the investors, the desire for anonymity has been of particular importance, given the critical attitude of German authorities towards an enlarged reserve role of the mark, but also for other reasons.

[1] For statistical evidence relating to the above and other themes developed in this article, see Appendix, pages 56-73.

The reasons why the German authorities have always looked upon the Euro-market with considerable reservations are far ranging. They relate to the potential of the Euro-market to be a source of uncontrolled liquidity creation, world inflation and exchange market instability; its weakening effect on the discipline of balance of payments adjustment; and its lack of adequate banking supervision, etc. The Euro-Mark-market was also seen as an alternative source of credit for German borrowers in periods of restrictive domestic monetary policy (depending on relative interest rates and other factors).

Paradoxically, it was at the same time felt that as long as the Deutschemark's international role developed "outside national borders", any potential negative repercussions for domestic monetary policy would be kept to a minimum. It can be argued that this attitude has in turn contributed to the rapid expansion of the Euro-Mark-market and has facilitated the mark's growing reserve currency role outside the area of national influence. But it may also be asked whether greater tolerance of the Deutschemark's reserve role via domestic channels would have effectively forestalled these developments or secured greater control for the national monetary authorities.

As far as the possible consequences for exchange rates (of the build-up of Deutschemark denominated official reserve claims in the Euro-market as compared to domestic asset holdings) are concerned, the Bundesbank stated in its Monthly Report for November 1979: "Whereas investments of foreign funds in the domestic financial markets, being capital imports, directly affect the German balance of payments and thus tend to push up the exchange rate of the mark, *investments of Deutschemark outside Germany* have no immediate impact on the balance of payments; nevertheless, such transactions, too, may influence the exchange rate of the Deutschemark."

Concern about the possible undesirable repercussions of a build-up of non-resident holdings of domestic mark assets for domestic monetary conditions and policies was always based in large part on the limited capacity of German money and capital markets (compared with those in New York and London), and the dangers of greater volatility in these markets affecting domestic liquidity and interest rates which the central bank might find difficult to offset.

3. A Second Stage

In a second stage, international demand for Deutschemark reserves was also accommodated — in addition to the ongoing build-up of Euro-mark reserve claims — to some extent by "asset swaps" involving the

acquisition of additional dollar claims by German investors, including the central bank, and the sale of Deutschemark claims to non-residents. The Bundesbank, in particular, could be seen on occasion as operating a unilateral or national "substitution account" for dollars. We are here mainly talking about the period of floating exchange rates during the 1970's, which (as is now realized) coincided with the period of most rapid growth in total international reserves (quite contrary to widespread expectations). During these years the share of the dollar in total official exchange reserves remained roughly unchanged, so that on the surface the growing share of the Deutschemark seemed more like a shift away from reserves held in sterling, rather than diversification out of the dollar. However, if the dollar holdings of the Bundesbank itself, and of other major reserve holders, whose currencies are increasingly held as reserve currencies, are excluded there has been a significant decline in the share of exchange reserves held in dollars.

The change in the net external position of the Bundesbank (and of its dollar holdings, in particular) is no adequate measure of its role as a "substitution account" for other countries' dollar reserves. For instance, over the three years 1976 to 1978 — following the first oil shock — a cumulative current account surplus of 38 billion DM was recorded; over the same period the Bundesbank's net external assets (excluding SDR allocations and valuation changes) rose by 39 billion DM. The bulk of the simultaneous increase in official foreign Deutschemark assets held in Germany by about 13 billion DM can be seen to have as a counterpart long-term capital outflows from Germany of some 17 billion DM. This would suggest a role as "banker of the world" for Germany similar to that sometimes attributed to the United States. However, assuming long-term capital outflows of a certain size as a "natural" counterpart of the current account surplus expected of a highly industrialized country, some part of the reserve accrual to the Bundesbank may be taken to represent substitution of dollars through the Bundesbank.

Over these three years, the Deutschemark/dollar exchange rate rose by roughly 40 percent, which indicates that the Bundesbank did by no means readily accommodate foreign demand for mark assets, and that those assets were in fact only to be had "at a price". This is confirmed by the strong rise of official Deutschemark reserve holdings in the Euro-mark-market, estimated at about 10 billion DM over the same period.

4. A Third Stage

In a third stage starting in 1979, Deutschemark claims are being acquired in the process of financing the newly emerged payments deficits. In 1979 and 1980 taken together, Germany incurred a current account

deficit of 39 billion DM, while gross capital outflows (including errors and omissions) amounted to no less than 92 billion DM. This total new gross "supply of Deutschemark" through the balance of payments of 131 billion DM had its counterpart (one-fourth) in a 33 billion DM reduction of the Bundesbank's reserves, and for the balance of 98 billion DM in a variety of short and long-term capital inflows, including substantial medium-term official borrowing in OPEC countries. In 1980 alone, the Bundesbank's reserve loss was 28 billion DM, almost exactly matching the record 30 billion DM current account deficit. (and thus the economy's dissaving). But with long-term private capital outflows substantially exceeding "normal" levels, a sizable gap remained to be financed through an increase in Deutschemark liabilities, including to official monetary authorities abroad.

The increase in foreign official reserves held in domestic mark assets for the same period has been estimated by the IMF at around 22 billion DM, the additions mainly occurring in periods of Deutschemark weakness in the foreign exchange market (especially in 1980 in the first quarter and again in the second half of the year). This includes about 8 billion DM resulting from intervention in the mark/dollar market by the Federal Reserve Bank of New York and to be used, in part at least, towards the redemption of Carter notes and bonds with Deutschemark denomination (and therefore to be treated as a special category). A considerable part of the OPEC investments for the benefit of the German public sector amounting to more than 12 billion DM does not seem to be included in the total figure of the increase in official reserves as identified by the IMF.

In 1981 the current account was still in large deficit (between 20 and 25 billion DM), though on a declining trend since the second quarter of the year. Especially compared with 1980, capital imports (excluding special official borrowing) were again more than adequate towards financing the current account deficit plus capital exports, though official borrowing also continued on a substantial scale. Net external assets of the Bundesbank increased again moderately.

On balance, the Bundesbank's inclination is not to rely unduly on the potential reserve currency role of the Deutschemark towards the financing of balance of payments deficits, for a number of reasons. As suggested earlier, and confirmed by the experience with other reserve currencies, prolonged periods of deficit especially on current account tend to call into question the policies pursued in that country and with it, the attractiveness of a currency to be held as a reserve asset by other countries. It is true, of course, that due to the special character of the current account surpluses of the OPEC countries the situation may in many respects differ today from that of earlier periods. In the case of major OPEC countries these surpluses serve the express purpose, at least to a considerable extent, to permit

accumulation of financial claims bearing an adequate rate of return, to be drawn on in future. To the extent that liquidity is a relevant factor for OPEC countries' investment policy, provision of attractive reserve claims by deficit countries would seem to satisfy their needs, at least as long as all major potential reserve currency countries are in deficit at the same time.

However, this is not the case even at present; in fact, the United States and the United Kingdom are in surplus. Even in the case of Germany, to rely on the "quasi-automatic" financing of very large current account deficits, through the provision of reserve type assets on a continuing basis would open up the spectre of an excess of the supply relative to the demand for Deutschemark assets. Over time, the problems related to a "mark overhang" then could well be on the table.

It may be relevant here to recall that during past years of large current surplus and continuing reserve gains in dollars, Germany found itself in the position of a country faced with difficult choices regarding its reserve policy. True enough, the decision taken to "float" the mark against the dollar, initially in May 1971 on a temporary basis (pending the Smithsonian re-alignment of exchange rates), and then more permanently as of March 1973, was primarily taken to limit the domestic monetary consequences of excessive accruals of dollars to the reserves. But considerations relating to the quality of the dollar as a store of value also were of some relevance over the years.

Undue reliance on quasi-automatic reserve liability financing of large current account deficits even in current special circumstances raises other questions as well. Even if surplus countries investing reserves in the Deutschemark could be counted on to hold on to their reserve holdings and to add to them, other holders, private and official, of liquid mark funds would not necessarily do so, especially if the exchange rate showed signs of weakening due to the size of the current deficit, or other factors. Recent experience indicates that for major currencies — dollar, sterling on the surplus side, the mark on the deficit side — prospects for its future performance (expectations) are an important factor weighing on the exchange rate. This is likely to be very relevant also with regard to the question of inherent "stability" or "instability" of a multiple currency reserve system and to the likelihood of such a system adding a new dimension of anti-inflationary discipline to the balance of payments adjustment process.

5. Conclusion

This three-stage approach to the process by which the Deutschemark has evolved into its current role is not without its pitfalls. Prior to 1973 the statistical data available are very sketchy and incomplete. To some extent

the rapid development of the mark as the second most important international reserve and investment currency since the early 70s may therefore be just a reflection of the growing improvement of statistical transparency.

Even after 1973, considerable gaps, inconsistencies, and uncertainties about the analytical relevance of certain data remain. The most important one since 1978/79 is the growing discrepancy between Euro-currency holdings in marks and above all U.S. dollars as identified by the IMF in its creditor statistics and by the BIS in its debtor statistics. There is also a growing volume of foreign assets held by monetary authorities and, if kept in the Euro-currency markets, identified by liable Eurobanks as such, which are not reported as foreign exchange reserves in the strict sense (including holdings of Eurobonds and of similar assets) and for which only very approximate estimates can be made.

Also, the significance of any overall share figure for a currency like the Deutschemark is greatly impaired by the fact that there are vast differences between holders. For instance, at the end of 1980 the overall share of official Deutschemark reserves of all countries amounted to about 12½ per cent. Excluding the dollar holdings of the Bundesbank the share was nearly 14% (calculation strictly on the basis of IMF data and excluding the value of ECUs issued against gold in the denominator). Exclusive of an undistributed residual of reserve holdings the same calculations arrive at percentages of 13% and 14½%, respectively. However, the shares of most industrial countries were much lower and those of oil-exporting countries and non-oil LDCs substantially above average. According to earlier calculations of the IMF, the Deutschemark share for the group of SDR and other basket peggers had reached in late 1978 already about 25 per cent of their total official foreign exchange holdings.

Another consideration is that the three stages identified above cannot be strictly separated in terms of time sequence. For example, when the second stage of "asset swaps" started in 1974/75, the accumulation of official Deutschemark reserves in the Euro-market by no means ceased. The bulk of additional Euro-holdings was still to come. Similarly, the third stage starting in early 1979 only means the advent of an additional factor, and not necessarily the end of a further build-up via the first and second avenues.

Finally, it should be underlined that the three-stage approach cannot be adopted "in isolation"; it must be seen in the context of the development of other reserve currencies, viz. the relative decline of the importance of sterling and the U.S. dollar. As already mentioned, the ascendance of the Deutschemark in the 70s until the end of 1976 was largely a switch between sterling and the Deutschemark in the number two position following the diversification move by official sterling holders of former sterling area

countries nearly "à tout prix". Similarly further demand for Deutschemark assets quasi-automatically arose when the dollar, as the pivot of the international monetary system, came under pressure in the foreign exchange markets in 1977 to 1979 following the advent of a U.S. current account deficit and signs of overextension. At the same time any further increase in the role of the mark may be narrowly circumscribed by the role of the dollar which continues to have all the attributes of the leading reserve currency, whereas the Deutschemark is largely used only as an investment currency, and less so for transaction and intervention purposes.

The Yen — A Newly-Emerging Reserve Currency

Michiya Matsukawa

Until 1974 the yen played no significant role either as a settlement currency in international trade or as a reserve currency in official reserves, though it was used to a small extent in the Far East as a local currency, mainly by Japan's trading partners. Only in late 1975 was the yen first listed by the IMF as one of the major currencies used in international reserves (in a table in that year's annual report) and its share in total official reserve assets was put at only 0.6 percent.

However, in the following years the yen emerged rapidly as one of the world's reserve currencies. This process was facilitated by Japan's impressive recovery from the economic crisis caused by the first oil shock and the increasing weight of the Japanese economy in the world economy: from 1975 to 1979 Japan's share in the aggregate GNP of OECD countries rose from 12.5 percent to 15.0 percent.

There was also an evolution in official policy. After 1975 the Japanese authorities assumed a more accommodating stance on the long-discussed issue of the internationalization of the yen, and gradually relaxed controls on foreign exchange transactions. As a result, the yen was traded more actively on foreign exchange markets. For instance, the share of the yen in the total volume of foreign exchange traded on the New York market rose from 5.3 percent to 10.2 percent between April 1977 and March 1980.

By 1979, the yen had become widely used as a reserve currency, its share rising to 3.6 percent (excluding ECU holdings in the definition of

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world reserves) at the end of 1979. It is, indeed, the third most widely used reserve currency, after the dollar and Deutschemark.

The process through which it became a major international currency can be analyzed by reference to the evolution of Japan's balance of payments.

1. Balance of Payments, 1975 — 1980

In 1975 and 1976, Japan's current account balance roughly coincided with the magnitude of changes in its official reserves; i.e. the deficit in the current account in 1975 was almost as large as the fall in the reserves and the current account surplus in 1976 was very close to the increase in reserves. In both years the net capital outflow remained relatively small and happened to correspond to an increase in the overseas liabilities of the banking sector.

In 1977 and 1978, when the current surplus grew rapidly, official reserves also increased, but much of the surplus was directed towards financing increased capital outflows. In 1978, in particular, the outflow of capital was accelerated further by a rise in the liabilities of the banking sector, a trend that continued in following years.

Indeed, the outflow of capital maintained its momentum even when the current account dived into the red as a result of the second oil shock in 1979. The unprecendented size of the deficits on both current and capital account could not be financed only by drawing on the reserves: the liabilities

TABLE 1

Balance of Payments of Japan
(in million dollars)

	1975	1976	1977	1978	1979	1980
Current Account	−682	3,680	10,918	16,534	−8,754	−10,746
Current Account	−1,410	−873	−3,832	−10,851	−10,241	5,465
Long-Term Capital	−272	−984	−3,184	−12,389	−12,618	2,934
Short-term Capital	−1,138	111	−648	1,538	2,377	3,071
Change in the Official Foreign Reserves	−703	3,789	6,244	10,171	−12,692	4,905
Yen Rate to 1 Dollar at year end	305.15	293.00	240.00	195.10	239.90	203.60

Note: The difference between the current account and capital account total and the change in the foreign reserves is composed of (1) monetary or banking transactions and (2) errors and omissions, of which the latter is relatively smaller than the former.

of the banking sector had to be increased by an inflow from abroad, some which was on official account.

The same was the case in 1980, when the current deficit remained large. True, there was a dramatic turnaround on capital account, which contributed to an upsurge in Japan's official reserves, but the banking sector continued as in previous years to increase its liabilities to overseas private and official holders.

2. Yen Holdings by Non-residents

The principal ways in which non-residents acquire yen are as follows[1]:

1. By converting foreign currency into yen and depositing it with the banks;
2. By buying yen-denominated assets;
3. By investing in Japanese equity shares;
4. By investing in yen-denominated long-term bonds and securities.

The increase in the amount of various types of yen assets held by non-residents during the past ten years is illustrated in the accompanying tables. The Japanese authorities did not resist this rapid increase; given the existing international monetary and economic situation, they regarded the process of the internationalization of the yen as inevitable and thus maintained a rather accommodating attitude towards it. As the precedent set by the Deutschemark in the previous 15 years had shown, the currency of a strongly-expanding economy invevitably becomes an international currency. As is well known, the Japanese economy has expanded year after year. Strong confidence in its future naturally caused a rapid increase in the demand for yen in the international money and capital markets. This phenomenon was seen both in the case of the pound sterling in the nineteenth century and the dollar after the second world war.

Apart from the attraction of the superior performance of Japan's economy, other factors also have encouraged investment in yen-denominated assets:

(1) As the international money system is based on the floating rate system at present, and at the same time, a huge amount of money

[1] The simplest way is for non-residents to acquire yen cash or its alternatives (like traveler's checks denominated in yen). This is popular among tourists and others who expect to use yen for their payments or remittances at the time.

The amount of yen cash or its alternatives purchased and held by non-residents is not considered to be so large as to constitute an important part of this study. However, recently the total amount of yen cash which is taken out of Japan by Japanese tourists may add up to a sizable amount. One way to estimate it is to follow the reflow of cash back to Japan, as yen cash which is taken out by tourists and spent at souvenir shops overseas is sent back to Japan, and falls under the category of "invisible trade" in the balance of payments statistics. The total reflow amount of yen cash thus estimated seems to be around one billion dollars per annum but the size of total outstanding yen cash outside of Japan is hard to estimate.

is in the hands of a limited number of asset holders, specifically the oil exporting countries, good management of large monetary assets becomes a matter of great concern for their holders. They are more and more interested in diversifying their investments in order to avoid possible exchange risks. Thus in the process of diversification, yen-denominated assets become very attractive as a part of their investments.

(2) Among the major currencies, the yen has experienced particularly extreme swings in its value. This record has attracted short-term investors, not the least being the speculators of "hot money".

(3) When Japan fell into deficit on current account, Japanese banking institutions were encouraged by the authorities to go overseas for financing rather than to rely upon sales of foreign exchange by the Japanese authorities. This movement provided a good chance for non-resident investors to obtain yen-denominated assets.

TABLE 2

Outstanding Amount of Non-Residents' Claims
Yen Deposits, Japanese Securities and Euro-Yen

(in billions of dollars)

End of	Yen Deposit[1]	Japanese Securities[2]	Euro-Yen[3]
1970	0.5	2.7	n.a.
1971	0.9	5.0	n.a.
1972	0.9	7.4	n.a.
1973	0.6	5.2	n.a.
1974	0.9	3.9	n.a.
1975	1.5	6.3	n.a.
1976	1.8	12.6	n.a.
1977	3.2	14.1	3
1978	7.2	23.1	8
1979	4.4	30.7	14
1980	10.1	42.6	17

[1] Source: Bank of Japan. There is some overlapping with "Euro Yen" which is estimated around a couple of billion dollars as of the end of 1980.

[2] Source: Bank of Japan. This item covers foreign investments in Japanese notes, securities and equity stocks expressed in yen. These investments, however, include securities issued by Japanese entities in foreign markets in their currencies. Around 80% of the figures in this column may represent investment in yen-denominated securities.

[3] Estimates.

Note: All figures are converted into U.S. dollars at the exchange rate obtaining as of the end of the year.

TABLE 3

Issues of Yen Bonds for Non-Resident Borrowers

	Yen Bonds* Floated in Japan		Yen Bonds Floated in Euro-market	
	(billions of yen)	(billions of dollars)	(billions of yen)	(billions of dollars)
1975	20	(0.1)	-	
1976	65	(0.2)	-	
1977	326	(1.4)	30	(0.1)
1978	827	(4.2)	15	(0.1)
1979	400	(1.7)	25	(0.1)
1980	261	(1.3)	55	(0.3)

Note: Figures in parentheses are the billion dollar equivalents calculated by the Yen-Dollar rate as of the end of the year.

* The amount purchased by non-residents is not available. The share of subscription outside of Japan varies in each case but it may not be misleading to assume that around a quarter of the total amount of this column was sold outside of Japan.

TABLE 4

Outstanding Amount of
Overseas Claims and Liabilities of Japan

(in billions of dollars)

	1975	1976	1977	1978	1979	1980
Claims:	58	68	80	118	135	167
Long-term	32	37	42	63	83	95
Short-term	26	31	38	55	52	72
Official	*13*	*17*	*23*	*33*	*21*	*26*
Banking	*13*	*14*	*14*	*21*	*30*	*45*
Others	*0.2*	*0.2*	*0.3*	*0.6*	*1*	*1*
Liabilities:	51	58	58	82	106	150
Long-term	14	18	20	29	36	49
Short-term	37	40	38	53	70	101
Official	*1*	*2*	*2*	*5*	*6*	*7*
Banking	*26*	*28*	*27*	*37*	*50*	*78*
Others	*10*	*10*	*9*	*11*	*14*	*16*
Balance	7	10	22	36	29	17

Source: (1975 — 1979) Ministry of Finance (1980) Estimate

All figures include both yen denominated and foreign currency-denominated amounts.

(4) Since the early summer of 1980, many fund managers outside of Japan, especially those who are interested in long-term investments, have found their yen-denominated assets safer and more attractive than alternatives when they took into account the continuously outstanding performance of the Japanese economy and the political and sociological environment, which is essentially stable and trouble-free.

(5) In connection with the "recycling" of the oil money, Japanese financial institutions have predominantly used the Euromarkets (or "zeno-markets") to finance their lending in third countries. The main purpose of this type of transaction is doubtless to avoid possible exchange risks in the years to come and these transactions have no direct effects upon holdings of yen-denominated assets. However, closer and deeper relationship between the Japanese financial market and the zeno-markets will help indirectly to accelerate the process of the internationalization of the yen.

3. Yen for International Settlement

Though the yen has become popular among non-residents, it is used mainly for the purpose of storing value rather than for settling international tradings.

In Japan's international trade and service contracts, the currency most often used is the U.S. dollar; the yen still plays only a minor role, though its share is increasing very slowly. In more concrete terms;

(1) In 1975, 78.5 percent of export contracts [2] was denominated in and settled with U.S. dollars; only 17.0 percent was in yen. In 1980, the dollar share in export contracts decreased to 66.3 percent while the yen share increased to 28.9 percent.

(2) In 1975, 88.9 percent of the import contracts[3] was denominated in and settled with U.S. dollars and only 0.9 percent was in yen. In the third quarter of 1980, when the latest statistical data became available, the dollar share of import contracts increased to 93.0 percent and that of the yen increased slightly to 2.3 percent reflecting a sharp decline of the British pound share.

The Ministry of International Trade and Industry announced on May 19, 1981, new statistics on monthly exports and imports which contain a

[2] Calculated on the basis of Letters of Credit. Accordingly, they do not include the contracts under the intergovernmental economic cooperation agreements and those of plant construction, etc., which are accompanied with credits.

[3] Calculated on the basis of Import Licenses.

currency breakdown of export contracts. For the month of April, the first month of fiscal year 1981, the currency breakdown is as shown in Table 5. The new statistics are calculated on the basis of the *number* of contracts rather than the *amount* involved. Therefore, the yen share thus calculated will only roughly correspond with its share calculated in terms of the currency amount of the contracts involved.

TABLE 5

Currency Breakdown of Export Contracts
For the Month of April, 1981

	$	Yen	Others
All Commodities	61.3	32.8	6.0
Foodstuff	82.6	15.0	2.4
Textiles	81.3	15.8	2.8
Chemical Products	79.3	13.6	7.1
Non-metal Mineral Products	55.2	41.2	3.5
Metal Products	82.5	15.2	2.3
(Iron and Steel)	(92.6)	(6.1)	(1.3)
Machinery	49.1	43.7	7.2
(Motors)	(48.0)	(47.5)	(4.5)
(Television Sets)	(55.8)	(31.0)	(13.1)
(Tape Recorders)	(39.2)	(47.1)	(13.6)
(Automobiles)	(50.7)	(43.7)	(5.6)
(Ships)	(42.2)	(55.2)	(2.6)
(Heavy Electric Machinery)	(51.7)	(41.7)	(6.6)
Others	61.2	30.9	7.9

5. Concluding Remarks

It is extremely difficult to figure out the precise amount of Japanese yen now held by non-residents because the realities of the overall international financial system are complicated and the available information is limited.

Nevertheless it may be safe to estimate that the total amount of yen held by non-residents was equal to 25 billion dollars at the end of 1979 and that it increased during 1980 by about 30 billion dollars, partly due to the appreciation of the yen vis-a-vis the dollar. Thus, at the beginning of 1981 the total amount of yen held by non-residents was presumably equal to about 55 billion dollars.

Regardless of the minor turmoils in the foreign exchange market in 1981 the yen has been traded without either strong upward or downward pressures. Between the monetary markets of Tokyo and New York, there has been a large interest differential in recent months, which is depressing the exchange rate of the yen against the U.S dollar. The interest differential between Japan and the United States affects the flow of short-term capital but has not had a strong effect on the continuous inflow of long-term capital into Japan. In other words, the yen's trend has not changed much in the sense that the yen is still very attractive as a vehicle for storing value and is moving closer to becoming a major reserve currency.

In its function as a settlement vehicle in international financial transactions, the role of the yen is still much less than that of the other currencies of major industrialized countries. The currency which is used in international contracts is determined by both parties of the contract, who at present are not interested in using the Japanese yen as their settlement currency. In this respect the yen is still at the stage of being an "incomplete reserve currency" or "secondary reserve currency" and by no means fully functions as a reserve currency like the U.S. dollar.

The history of the Japanese yen as an international currency is still very short and its emergence in the international financial markets has been relatively fast. Consequently it is difficult to foresee in what manner and by what magnitude the yen will be internationalized in the near future. The monetary authorities of Japan maintain a very cautious attitude. They fear that they may lose reasonable control over the monetary aggregates of the yen and also that effective countermeasures in the case of a foreign exchange crisis may be weakened.

It may be worthwhile to conclude this study by quoting some concluding remarks from a speech made last year by Mr. Shijuro Ogata, of the Bank of Japan[4];

> "We feel that the gradually wider use of the Japanese yen in international transactions is inevitable. . . .
>
> "While it is not possible to stop such evolutionary processes in the markets, we are not always or not necessarily happy with the larger holding of yen balances by non-residents, because such a development will make domestic monetary control more complicated and more difficult. . . .
>
> "The internationalization of the Japanese yen is not the target we should aim at, but rather the natural outcome of the development of our economy as well as the financial markets, or the inevitable price for such development.."

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[4] Speech by Mr. Shijuro Ogata, Executive Director, The Bank of Japan, to a group of foreign bankers made on April 8, 1981 in Tokyo.

The Swiss Franc in a Multiple Reserve Currency System

Fritz Leutwiler and René Kästli

1. Introduction

Since the beginning of the 1970s the role of the US dollar as an international reserve currency has gradually decreased. The newly emerging reserve currencies have been the Deutschemark, the Japanese yen and the Swiss franc. Whilst the estimated $8 to 10 billion in official Swiss franc holdings still seem small in comparison with the US dollar this ranks the Swiss franc third or fourth in official foreign exchange holdings at present.

Switzerland differs from the other reserve centers mainly in two respects. Switzerland is by far the smallest and the most open economy of the countries whose currencies function as international reserves. It will be argued that both of these differences accentuate the problems connected with the international use of a currency.

It might be helpful to clarify what is meant when the reserve role of a currency is discussed. International transactions in a currency can be classified in the following way:

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Use of a currency	in private transactions	in official transactions
as medium of exchange	(1) (transaction currency)	(2) (intervention currency)
as store of value	(3) (investment currency)	(4) (reserve currency)
as measure of value	(5) (reference currency) (unit of account)	(6)

In talking about the reserve role of the Swiss franc we are mainly concerned about the functions listed under numbers (2) and (4)[1], with occasional reference to the other functions.

In trying to tackle the question of the role of the Swiss franc in a multiple reserve system, the following analysis discusses first the problems for Switzerland of becoming a reserve center. The (market) forces which led to the involvement of the Swiss franc in the newly emerging multiple reserve system are then discussed. The possible policy choices and the actual policy choice of the Swiss National Bank with regard to this phenomenon are described next. A summary and some conclusions will conclude this paper.

2. Should We Bother About the Reserve Role of the Swiss Franc?

In the literature the gains resulting from the status of a reserve currency are stressed much more than the associated costs. Why then is it that the Swiss National Bank is concerned about the reserve role of its currency?

There are, no doubt, some benefits from being a reserve-currency center. As foreigners are willing to hold (more or less liquid) assets denominated in the reserve currency, the demand for such assets is bigger than it would be otherwise. This means that a given supply of such assets will yield less if they are denominated in a reserve currency.[2] The so-called seigniorage gains associated with a reserve currency refer to the same facts, although they are often described rather inaccurately as enabling a reserve

[1] The difference between the so-called primary and secondary reserve currencies seems to be that the primary reserve currency (the US dollar) is used without restrictions in all six functions while a secondary reserve currency does not or not fully serve the purposes mentioned.

[2] In this context it is not important whether the additional demand stems from private or official sources.

currency country to finance a deficit in its current account merely by issuing domestic currency to foreigners. From what was said before it becomes clear that such a deficit can be financed more cheaply (the same is true for other debts, too).

There are certain characteristics which make a currency a likely candidate for becoming a reserve currency. The same characteristics, stable political and economic environment, basically unrestricted capital movements, and a developed financial sector, also promote a wider use of a country's currency in private transactions. This has also some beneficial effects for such an economy: the growth of the financial sector will be stimulated and the exporters and importers are more likely to calculate and trade in domestic currency, thus diminishing the foreign-exchange transactions that would in turn decrease the costs and the foreign-exchange risks.

While our economy has certainly gained from the growing reserve role of the Swiss franc in recent years, there are also some disadvantages associated with this development. It will be argued that monetary policy has become more difficult and is less likely to succeed.

Since 1980 the Swiss National Bank has been setting a monetary target in terms of the monetary base.[3] The long-term goal consists of a substantial reduction of today's inflation rate of some 7 percent. In order to avoid too drastic shocks on the real economy, a gradual lowering of the inflation rate is intended. The reserve role of the Swiss franc can hamper this policy, mainly in two ways.

The money supply relevant to the Swiss inflation rate excludes for obvious reasons Swiss franc holdings by foreigners. If for example a shift between domestic and foreign demand deposits with Swiss commercial banks takes place this will alter the money supply in the full amount of the shift. But such a shift does not reduce the demand for base money analogously.[4] This implies that a certain course of base-money expansion — depending on the distribution between domestic and non-domestic demand deposits — is consistent with different courses of monetary policy. This is naturally not new, because it is well known that e.g. changes in interest rates alter the link between the monetary base and the money supply in a systematic way. These systematic changes are predictable and can therefore be taken into account in the course of monetary policy. The same systematic behavior cannot be assumed for the described shifts between domestic and non-domestic deposits. If the reserve role of the Swiss franc were to lead to a less stable demand for non-domestic deposits

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[3] From 1975 to 1978 a monetary target in terms of M_1 was set.

[4] In the demand for base money of the Swiss commercial banks the legal requirements have become more important in the last few years.

this would therefore increase the probability of pursuing an overly restrictive or overly expansive monetary policy.

There is another potentially harmful effect of the growing international use of the Swiss franc on monetary policy. Switzerland is exporting some 40 percent of its GNP. Recessions or booms in the exporting industries therefore determine to a large degree the course of the whole economy. Foreign exchange rate movements that considerably change the competitive position of Swiss exporting industries produce heavy shocks to the real economy. It would appear that excessive exchange-rate movements become more likely the more a currency becomes a reserve currency. Sudden shifts from one reserve currency to another will trigger off overshooting revaluations or devaluations which are bound to create large fluctuations in overall real economic activity. This in turn will prompt the central bank to intervene heavily on the foreign exchange market, making it very probable that the central bank is forced to abandon other goals of monetary policy, such as a certain money supply goal.

The Swiss experience in the fall of 1978 illustrates this point quite well. In the first nine months of that year, the trade weighted exchange rate rose by some 20 percent, exceeding the inflation-rate differential by almost the same measures. This drastic deterioration of the competitiveness of Swiss exporters, was soon reflected in a drastic reduction of incoming orders. If this development had continued for some time we would have faced a serious recession. In this situation the Swiss National Bank decided to abandon its monetary target temporarily in favor of a foreign exchange rate goal. Not surprisingly this policy shift had effects not only on the foreign exchange rate but some time later also on the inflation rate. It is mainly the abundance of liquidity after the policy shift of 1978 which is responsible for the increase in inflation rates in Switzerland in the last two and a half years. We assume that the reserve function of the Swiss franc (and its growing importance as an international investment medium) was partly responsible for the drastic upward movement which eventually forced the Swiss National Bank to abandon the goal of a stable price level. The then widespread belief that the economic problems of the United States would persist for some time led to a rapid depreciation of the dollar. This in turn triggered an even bigger loss of confidence in the dollar, causing official and private investors to shift the currency composition of their portfolios. By such a move channelled to a great extent towards the Swiss franc, a large market (that in dollars) collided with a small market (that in Swiss francs) resulting in an unprecedented turmoil on the foreign exchange markets.

The considerations made here suggest that Switzerland is not too happy about its role as a reserve-currency center, even if this role may seem to be comparatively unimportant. It is felt that the reserve-currency function

can cause the money demand to become less stable, therefore making a monetary-base policy less likely to succeed. Moreover, because of the openness of its economy, Swiss monetary policy has to be more sensitive to exchange rate movements, although the smallness of the Swiss economy is likely to create a comparatively high variability of foreign exchange rates.

3. Reasons for the Growing International Role of the Swiss Franc

The sharp fluctuations in foreign exchange rates since generalized floating was put into practice has led to a massive redistribution of wealth. Especially in the first few years after 1973, investors, whose portfolios consisted mainly of dollars assets, were on the losing side. The most simple means of reducing fluctuations in the value of a portfolio caused by foreign exchange rate fluctuations consists of a currency diversification of the financial assets.

In the early 1970s the dollar was the predominant reserve currency. Central banks therefore had in general a very one-sided currency composition of their portfolios. In our opinion — corroborated by some evidence — central banks as a group behave in such situations not very differently from private investors. We therefore think that the currency unrests of the mid-1970s created strong incentives for currency diversification by central banks.

The Swiss franc was a likely candidate for such a diversification. The "fundamentals", a stable political and economic environment (the most conspicuous parts of the latter being the comparatively low inflation rate and the persistent surplus on current account) and a well developed financial sector were apt to create confidence in our currency. At least up to 1978 the foreign exchange markets reflected this confidence by an almost unbroken revaluation of the Swiss franc. This general situation caused a strong additional demand for Swiss-franc assets.

There is another reason why the Swiss franc serves as a reserve-currency. Owing to the policy of the Swiss authorities to grant free access for all borrowers to our financial markets we have had very substantial capital exports. Borrowings by LDCs, either directly or through development organizations, have thereby proved to be sizeable. Most of these capital exports have led to debt denominated in Swiss francs. These liabilities assumed proportions of frightening magnitude in terms of other currencies when the Swiss franc appreciated heavily. Most of these debts having long maturities, hedging was possible only by acquiring Swiss franc assets. If the debtor is a government or a government agency, it is quite natural that they should endeavor to match the Swiss franc debts with a

corresponding diversification of the currency reserves — if there are any.

The reasons that create a demand for Swiss franc assets by central banks also apply to private investors. Since we assume basically the same behavior by central banks and private investors we should — and actually do — observe a somewhat parallel growth of the Swiss franc use for investment and reserve purposes.

The basic reason behind the evolution of a dollar standard into a multi-currency reserve system is somewhat blurred by the extreme foreign exchange rate movements since generalized floating started. Foreign exchange rate movements are explained to a large degree by divergent monetary policy leading to different inflation rates and interest rates in different countries. Actual or supposed differences in monetary policy therefore tend to strengthen the move away from a one-currency-reserve system to a multi-currency-reserve system.

4. Policy Alternatives and the Policy Choice of the Swiss National Bank

The 8 to 10 billion dollars worth of official Swiss franc holdings mentioned at the beginning were built up in the 1970s.[5] At that time the Swiss National Bank pursued a policy which aimed at preventing the Swiss franc from becoming a reserve currency. That policy, naturally, was guided by the considerations mentioned earlier. From the figures it has to be concluded that this policy has failed.

This conclusion shows that there are certain policies which are bound to fail and, therefore, are not real alternatives. In order to get down to the policy choice it is necessary for the alternatives to be confined to those that seem likely to succeed.

By tradition, financial markets in Switzerland are comparatively little regulated. It is generally felt that this principle has proved successful and it would therefore be out of question to introduce highly interventionist measures such as a two-tier foreign exchange market and a prohibition of secondary market operations for Swiss franc bonds. But this implies that it is in fact not possible to prevent all transactions which would occur in order to circumvent certain new regulations if measures aiming at a limitation of the reserve role of the Swiss franc were taken. This also applies even more pronouncedly to foreign markets which are under no direct control by Swiss authorities. This in turn implies that it is no use introducing very strict measures in order to prevent the Swiss franc from becoming a reserve currency. Because financial markets tend to be very innovative these meas-

[5] The latest available figures are as of 1979.

ures can be circumvented and, as the figures show, were actually circumvented. Therefore such measures will not be very effective.

There is another category of measures we judge to be not too successful. Declaring intentions and expressing wishes are of little avail if one has no assurance that those to whom the exhortations are directed will really act accordingly and if there is not even a minimal leverage to enforce intentions.

The conclusions from these general considerations are that we cannot really opt for the solution which would suit us best, namely to prevent the Swiss franc from assuming a reserve role. Therefore we have to look for the second-best solution.

As was pointed out before, it is not only the reserve role of the Swiss franc which bothers us, but also the use of our currency in private international transactions. Our policy therefore tries to get control over all (private and official) international transactions. In this respect two broad lines govern our policy. Firstly, it still seems sensible to avoid those developments that can be avoided. Secondly, it seems most important to be informed about what is happening, because this allows counteracting measures e.g. in response to a shift in the money-demand function.

As to the first point, this has the consequence that we are still trying to discourage some forms of an internationally-used Swiss franc. Two outstanding examples are: issues of Swiss franc papers outside Switzerland and the large-scale use of the Swiss franc in some currency baskets, such as the one which has been discussed for oil bills. With respect to the latter it is perhaps worth mentioning that we think it wrong to conclude that the Swiss franc would not be affected in any way if it were only included in a basket but not used as a transaction currency.

Basically we see two ways in which we can be better informed about the international use of our currency. We can either try to bring back Swiss franc business which has been done outside Switzerland so far, or we can seek more information about the use of the Swiss franc abroad. So far policy measures have concentrated on the former approach.

However, bringing back Swiss franc transactions to Switzerland is not so easy as it may seem. There are substantial international differences in the legal framework governing banking activities. This leads to rather big competitive advantages and disadvantages of certain banks in certain fields. In order to reduce these differences, some international coordinating measures have to be taken. It must therefore be hoped that the recommendations of the Bank for International Settlements (BIS) working group on Euromarket activities, to the effect that balance sheets of the banks should be consolidated and a certain evening out of competitive conditions should be achieved, will be followed. But there is no use waiting for these

coordinating moves since such a coordination is, at best, some years ahead.

In our efforts to pursue a successful policy with regard to the international use of our currency we will therefore, for the time being, have to take the international institutional framework as given. In order to reduce competitive differences and thereby create incentives to shift back Swiss franc business to Switzerland, our national rules have to be changed. This was done in quite a consequent way for both capital import and capital export regulations.

Capital import regulations were used quite extensively in the past. In a system of fixed exchange rates this instrument was used in order to prevent excessive money creation. Due to the fact that Switzerland traditionally had a low inflation rate and ran a surplus on current account the Swiss franc tended to be strong. Since Swiss authorities were very reluctant to adjust the foreign exchange rate the official rate would not clear the market. Therefore substantial short-run capital inflows to Switzerland whenever a currency was expected to devalue (or the Swiss franc expected to revalue) translated into excessive growth rates of money supply. The measures used to restrict such growth were minimum reserve requirements, restricting the growth of credits, prohibiting banks to pay interest or charge a commission on Swiss franc deposits by foreigners.

Since generalized floating was introduced the main problems of Swiss monetary policy have been the strong and often overshooting movements of the foreign exchange rate. As was described earlier, these movements can have damaging effects on the real economy. Up to 1980 the main instruments used in the field of capital imports were the prohibition to pay interest and the charge of a commission (of up to 10 percent per quarter) on Swiss franc deposits by foreigners.

The efficacy of the measures mentioned were limited. This is not too surprising if one takes into consideration what was said earlier. As this was clearly understood and the general situation of a rather weak Swiss franc allowed such moves, a gradual dismantling of the capital import restrictions was started. In August 1980 the last step was taken when the interest ban on short-term deposits and the legal framework authorizing the Swiss National Bank to take such measures were lifted.

In Switzerland capital exports of Swiss francs 10 million and more are subject to approval. This instrument allows a considerable degree of influence over the international use of our currency. The rules governing these capital exports, revised in the fall of 1980, are again under scrutiny at the moment. It was also decided not to try to prevent developments that cannot be controlled. It is thought that a policy which tries to get as much knowledge as possible of the international role of our currency (in this context

especially of central bank behavior) and which is aimed at bringing back to Switzerland transactions that were hitherto considered as undesirable will eventually show better results.

In view of the risks inherent in such an approach the change in policy has been careful and gradual. Consequently the steps taken by the Swiss National Bank in this respect have been rather undramatic if single moves are looked at, but still significant if taken as a whole.

Since the fall of 1979 the World Bank has been allowed to place four note issues of Sw Fr 200 million each exclusively with central banks. These issues have clearly shown that central banks behave at least in one way exactly in the same manner as do other investors: the better the yield in relation to market conditions, the higher the demand. We expect to carry on with this type of investment and hope to gain further insight into central bank behavior by means of these operations.

For some time we have been trying to develop a money market in Switzerland. This objective is being furthered by the issue of negotiable Money Market Debt Register Claims against the Swiss Government. These certificates are issued regularly to certain investors. In one of the small steps mentioned the group of potential investors was extended to foreign central banks, thus again creating additional incentives for them to operate through markets in Switzerland. Quite recently, Sw Fr 200 million of promissory notes of the Swiss National Bank were issued to another central bank. However, operations of such a kind are not open to all central banks.

Since September 1980 foreign central banks have been able to participate in all activities other market participants can conduct in the field of Swiss capital exports, subject to approval. In order to try to prevent potentially disturbing developments, special conditions were attached to such transactions. The central banks were asked to confirm in writing that they would hold their investments for their own account until maturity. It soon turned out that these conditions were too restrictive in order to achieve our goal of shifting central bank business back to Switzerland. Therefore the conditions mentioned will probably be relaxed soon.

In summing up the remarks concerning official policy in respect of the international use of the Swiss franc, it may be stated that today the Swiss National Bank is following a more realistic policy than it was in the 1970s. Nowadays, it is prepared to accept developments which have taken place, and it is not trying to prevent them, but rather to be better informed about them. This is done by means of bringing back transactions to Switzerland, and by close observation of the international role of the Swiss franc. With respect to the reserve role of our currency there have been and probably will be some moves in the direction of accommodating the needs of central banks better than in the past.

5. Summary and Conclusions

In the multi-reserve-currency system which has emerged since the move to generalized floating, the Swiss franc plays an important role, at least if this role is judged from our point of view. We think that the multi-reserve-currency system, in which the dollar will be predominant, is likely to be in existence for some time. Even if the dollar is recovering confidence at the moment, the risks for the participating central banks inherent in a one-asset-reserve system are too big.[6]

There has been a shift in the Swiss National Bank's attitude in so far as we no longer pretend that a multi-reserve-currency system has not emerged. Although we are not happy about the international role of the Swiss franc, we are ready to adapt policy measures to existing circumstances.

Some rather undramatic steps taken recently were aimed at acquiring more information concerning the international role of our currency. We strongly hope that improved information will enable us to react more efficiently and more quickly to developments which could endager the basic goals of monetary policy. In the long-run, though, national measures can solve only part of the problems. An international move aimed at evening out competitive advantages of the respective banking systems would greatly help in shifting business back to the home countries.

But even more important is the recognition that much of the move towards more international use of currencies is due to incentives created by extreme foreign exchange rate movements which in turn is accounted for by a monetary policy of some countries difficult to interpret, therefore leading to unstable expectations with respect to foreign exchange rates.

Since the international reserve will continue to be based on currencies of single countries, the monetary policy of the reserve-currency countries will be of utmost importance for the smooth functioning of such a system. If central banks will pursue a clear and clearly recognizable monetary policy geared at stable price levels, there will be no major disturbances in the system. Under these circumstances there will be no need for major reforms of such a system in the near future.

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[6] Since currency baskets have fixed weights, and portfolio diversification by maturities is more difficult to achieve with such assets we think that diversification will also in the future take place mainly by means of acquiring single currency assets and not assets denominated in some baskets.

The United Kingdom's Experience in Winding Down the Reserve Role of Sterling

Christopher W. McMahon

This paper traces briefly the history of the sterling balances since the early 1960s. End-year figures for these balances are shown in Table I. It concentrates on the official (country)[1], rather than the private, balances. The former were the main focus of official concern, being substantially larger during most of this period as well as being heavily concentrated with a small number of large holders, and thus potentially highly volatile. Of the official balances, the great majority were held by the traditional "Sterling Area" countries; in 1968 they held over 90 percent of all official balances. The note only considers developments that were specifically linked to the sterling balances, although a very large part of the UK's external policy, especially in the first part of this period, could be considered to be related at least indirectly to the sterling balance "problem".

In 1960 sterling still accounted for 38 percent of the world's currency reserves. By 1970 this had fallen to 13 percent, and by 1980 to only 2 percent. The sterling balance problem as such had originated in the second world war when holdings had increased sharply as United Kingdom suppliers had been unable to purchase goods with their sterling receipts. Between 1939 and 1945 total overseas sterling balances had risen from £517 million to £3,602 million. Policy after the war had aimed initially to increase the use of sterling as a trading and reserve currency. In return for

[1] This excludes the holdings of international organizations, which largely represent UK subscriptions to these institutions and which have not displayed the volatility shown by country balances.

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holding their reserves in London, Sterling Area countries had access to the United Kingdom's foreign exchange reserves and to the London capital market, and to assist finance in London there was a so-called ring-fence of exchange controls between Sterling Area countries and the outside world

TABLE 1

Overseas Sterling Balances
millions of pounds: end year

	Exchange reserves in sterling held by central monetary institutions and international organizations[1]		Banking and money market liabilities to other holders
	CMIs	International organizations	
1962	2,223	89	1,551
1963	2,335	105	1,662
1964	2,326	110	1,704
1965	2,214	104	1,756
1966	2,187	117	1,684
1967	2,001	101	1,588
1968	1,803	117	1,460
1969	2,146	173	1,407
1970	2,365	182	1,673
1971	3,030	210	2,382
1972	3,361	257	2,291
1973	3,379	310	2,284
1974	4,303	331	2,500
1975	3,714	386	3,229[2]
1976	2,203	436	3,484
1977	2,132	703	4,965
1978	1,735	875	5,258
1979	2,218	1,102	7,839
1980	3,556	1,108	10,321
1981 June	3,817	1,101	11,511

Source: Bank of England Statistical Abstract and Economic Trends
[1] Excluding the International Monetary Fund
[2] £150 mn of increase due to improved reporting procedure

(although there were no UK exchange control against the Area), and various schemes were instituted, in the commodity markets and elsewhere, to encourage the use of sterling.

1. The First Basle Agreements

By the end of the 1950s, however, the benefits of Sterling Area membership had been substantially eroded, especially through the reintroduction of convertibility for sterling. The perennial weakness of the UK economy already encouraged Sterling Area countries to diversify part of their reserves out of sterling and the diminution of their former privileges served to increase this trend. In response to this, one of the main objectives of UK policy came to be to prevent such diversification or at least to prevent diversification occurring too rapidly.

During the 1960s there were sometimes sharp movements in sterling balances, particularly when sterling was under pressure, and these greatly exacerbated the repeated sterling crises[2]. For instance, in November-December 1964 there was a substantial rundown of the balances associated with the loss of confidence following new measures introduced by the incoming government. And in the summer of 1965 there was a further crisis of confidence following a sharp deterioration in the trade figures.

These crises were always liable to recur, given the endemic weakness of the economy. They were seen as a threat to international monetary stability as a whole, as well as inhibiting economic management in the United Kingdom, and this helped foster a willingness by overseas central banks to co-operate with the United Kingdom in seeking a solution to this problem. There was a feeling that some sort of funding arrangement might help and in 1965[3] the Basle central bank governors commissioned a study from the Bank for International Settlements (BIS) to examine the sterling balances. This study, by Dr. Milton Gilbert, the Economic Adviser of the BIS, clarified a number of issues on the nature of the balances, vis. that they were largely the liquid assets of governments, central banks, and private individuals, and that simplistic solutions, such as the conversion of the balances into long-term debt, would therefore not be feasible. It found that "the

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[2] Movements in sterling balances were regarded as destabilizing to the UK economy in that they only responded with a lag to economic conditions. For instance, payments deficits associated with booms were in their early stages financed by foreign inflows and this disguised the incipient problems and delayed counter-cyclical responses.

[3] There had been an earlier "Basle Agreement" in 1961 when the revaluation of the Deutschemark and the guilder prompted fears of a realignment of sterling and there were also a succession of 'swap lines' agreed, particularly with the Federal Reserve System. These were, however, not related specifically to the problem of the sterling balances.

essence of the matter was that a severe balance of payments deficit, combined with a heavy flight from the currency, had left a position in which the reserves were about a minimum level, given that the ordinary sources of international assistance had been fully drawn upon. In these circumstances, any pressure on the reserves coming from the sterling balances would be a threat to the sterling parity."

Following this report and some protracted negotiations, eleven central banks agreed to set up a number of short-term agreements totalling about $1 billion, largely three-month swap facilities, with the Bank of England. Their objective was to help smooth fluctuations in sterling balances and, being of such short duration, they were clearly not designed to assist their rundown. The Bank of England was only permitted to use the facility to cover a maximum of 50 percent (raised to 80 percent in September 1967) of reductions in the United Kingdom's reserves arising out of movements in the official and private sterling balances of the Overseas Sterling Area (OSA) and Non-Sterling Area (NSA)[4]. The agreements were renewed on virtually the same basis in 1967 and 1968.

2. Decline of Sterling

Nevertheless, the official balances contributed to the growing pressures on sterling in 1967, falling by nearly £200 million in the second half of the year. The devaluation in November 1967 came as a major shock to the system and was soon followed by widespread further diversification: in 1968 in the second quarter alone, official balances fell by almost £300 million. By this time the Bank of England was discussing at the BIS and elsewhere an extension of the earlier Basle Agreement. It was generally accepted that further diversification of OSA official balances was highly probable and it was calculated that to meet likely diversification, and to repay short-term debt, the United Kingdom would have to run such a large surplus as to be disruptive to world trade. Moreover, it was not even clear that an improvement in the United Kingdom's external position would help to finance diversification: rather it might have the perverse effect of increasing the amount that had to be financed since some diversification was at present being inhibited by recognition of sterling's exposed position. The conclusion was that an international support arrangement was required, for a considerably longer period than hitherto, with the objective of inducing

[4] Falls in OSA balances were taken as affecting the UK's reserves by 66⅔% and NSA balances by 100%. An additional initial condition dropped in early 1968 was that drawings could not exceed by more than $250 mn the amount of the United Kingdom's unused drawing rights on the IMF.

sterling balance holders not to diversify their balances and, in. ofar as this objective was not met, of helping the United Kingdom to finance this diversification.

In the event a two-part package was put together. First, a $2 billion facility was provided by twelve central banks and the BIS to finance reductions in OSA official and private holdings below an agreed starting level. Drawings on this facility could be made during the first three years and repayment was required between the sixth and tenth years. The BIS was able to draw on three sources of finance to meet any drawings by the Bank of England: short- and medium-term borrowings in financial markets, deposits placed voluntarily with the BIS by Overseas Sterling Area central banks, and standby facilities of almost $2 billion provided by the twelve participating central banks. Secondly, agreements — mostly of three years' duration — were negotiated with over 60 OSA countries under which the UK government gave a dollar guarantee for the bulk of their official sterling provided that they held a minimum proportion of total official reserves in sterling; these minimum proportions varied according to the circumstances of individual countries.

As the level of balances was already below the trigger point when the Basle facility was authorized the Bank of England was able to draw $600 million in September/October 1968. The Agreements coincided with a series of other measures which restored confidence in sterling and the United Kingdom was therefore able to repay the entire $600 million by September 1969. The BIS did not need at any stage to call on the stand-by facilities provided by the participating central banks. The $2 billion facility was extended virtually unchanged for two years in 1971. It lapsed in September 1973, having been unused since September 1969 when the initial drawings were repaid.

The dollar guarantee arrangements had the desired effect of helping to stabilize the balances, but in a sense worked too well. In the years immediately following the agreement, the Sterling Area countries as a whole enjoyed balance of payments surpluses and the minimum sterling proportion clause had the effect therefore of *increasing* total sterling balances. In September 1968 OSA official balances were £1,506 million, by September 1971 they had risen to £2,760 million. These increases were a source of widespread concern and ensured that, when the guarantee agreements came up for renewal in 1971, the minimum sterling proportions — i.e. the fractions of total reserves each country was required to hold in sterling — were reduced by 10 percent. More significantly, as a result of concern expressed during negotiations over the UK's accession to the EEC, the British government indicated, in the 'Rippon letter' of January 1972 which was annexed to the Treaty of Accession, that they were "prepared to

envisage an orderly and gradual rundown of official sterling balances after our accession".

There were two short-term renewals of the guarantees, in September 1973 and March 1974. In each case, as a discouragement to countries increasing their holdings, a ceiling was put on the amount the British government was prepared to guarantee. Following the generalized move to floating and the subsequent increase in volatility of exchange rates they became technically increasingly difficult to operate; moreover, especially after the inflow of oil money into sterling, a constantly decreasing proportion of official sterling was subject to these guarantees which therefore became largely irrelevant. When they were discontinued at the end of 1974, only 59 per cent of participants' sterling was covered.

As mentioned above, there was a substantial inflow of oil money into sterling after the first oil price shock, pushing official holdings to a peak of £4,512 million in the first quarter of 1975 causing a rather different set of countries from the traditional holders to become the major sterling holders. (This is not to deny that there was some important overlap between the two sets.) By 1975 OPEC countries accounted for over 70 percent of all sterling balances. The inflows financed the UK's external deficit in these years, again serving to conceal the extent of disequilibrium in the economy, and thereby — with much more serious effects than in the earlier cycles — delaying the necessary adjustment measures.

The extreme volatility of the sterling balances that had flowed into the United Kingdom in the aftermath of the first oil-price shock was demonstrated as soon as confidence factors were reversed. Official balances fell from their March 1975 peak of £4,512 million to £2,371 million by September 1976 — £900 million of this fall occurred in the second quarter of 1976 alone. These withdrawals were a major component of the sterling crisis of that year, and greatly strengthened the feeling that the maintenance of a residual reserve currency role for sterling was anachronistic.

3. A New Basle Facility

Towards the end of the year, as part of a whole series of measures and agreements designed to restore confidence, a third Basle Agreement was negotiated. Initially it seemed to be generally accepted that it should be on the lines of the 1968 Basle Agreement although without the exchange rate guarantees, but the eventual outcome was significantly different. It was quite clear from the start that potential participants in a facility regarded an agreement by the British government with the IMF on a program of measures to support the UK's application for a new IMF stand-by facility to be a necessary pre-condition for any substantive discussions. These discus-

sions then took place after the agreement with the IMF in November 1976 and the new Basle facility was announced in January 1977. In the words of the Chancellor of the Exchequer at the time:

> "The purpose was not only to achieve greater international monetary stability and to ensure that sterling and the exchange markets ceased to be affected by pressures associated wtih any rundown of the official sterling holdings, but also to enable the British government to achieve an orderly reduction in the role of sterling as a reserve currency".

The 1977 facility differed from the 1968 facility in that the accompanying arrangements envisaged a rundown of the official sterling balances rather than stabilizing them at their pre-existing level. Eleven central banks (plus the BIS) made available a total of $3 billion for two years with an optional third year and repayment of any drawings was to be made over the succeeding four years. The Bank of England was entitled to draw on the facility for the full amount in the first year and 75 percent thereafter of any net fall in the official[5] sterling balances below an agreed figure (£2,165 million) but drawings could normally only be made when the UK's external reserves were below $6,750 million.

For their part, the UK authorities agreed to seek to reduce the official sterling balances to working levels by the sale of foreign currency securities and other appropriate means, and to seek that restraint should be exercised with respect to future increases in private sterling balances. The foreign currency securities were to be negotiable bonds of five to ten years' maturity, and no more than 75 per cent of them were to be denominated in US dollars.

In February and March 1977 officials from the Bank of England visited the 15 main holders to explain the new policy, to seek subscriptions to the proposed foreign currency bond issue, and generally to solicit support for the new arrangements. The results were remarkably successful. 15 holders subscribed a total of £395 million when the bonds — denominated in dollars, Deutschemarks, Swiss francs, and Japanese yen — were issued in April. Other holders agreed to reduce their sterling holdings by other means. By mid-June it was felt that any further reduction in the balances was unlikely since, with one or two exceptions, countries' balances were now down to working levels. Subsequently, the Bank of England continued actively to seek the support of official holders and the co-operation received is shown by the fact that even by end-1979 official holdings still stood at only £2,218 million despite the restoration of confidence in sterling in the intervening period and the fact that some holders had initially been holding

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[5] Following the imposition of exchange control against the Sterling Area in 1972 there was no longer any differentiation between Overseas Sterling Area and Non-Sterling Area.

unsustainably low balances that would clearly necessitate some reconstitution. Official balances have risen by about 75 per cent since the end of 1979 but even this increase is relatively small when considered in the context of the enormous OPEC surpluses that have accrued during this period and taking into account also the effects of world inflation.

Because of the success of these measures, and the associated restoration of confidence in sterling, the Bank of England had no need to make recourse to the $3 billion Basle facility. This lapsed, unused, in February 1979 when the UK authorities decided not to take up the option to extend it for a third year.

4. The Private Balances

This paper has concentrated on the official balances, which have traditionally been regarded as the source of the sterling balance "problem." The policy of restraining their growth has ensured that official sterling balances are only now reaching in nominal terms the levels of 1974-5 — and are in real terms therefore still only about half of these levels — even after their marked increase following the second oil price shock. Private holdings are very widely dispersed (incidentally making it totally impracticable to approach individual holders as is done for the official balances) and for many years up to the mid-1970s were fairly stable, rising only slowly. Partly for these reasons, they were not covered in the 1977 Basle Agreement.

However, they have recently risen quite rapidly and, as Table 1 shows, they are now three times as large as the official country balances. The recent increase may be partly linked with the greater use of sterling by overseas banks since the abolition of UK exchange control in October 1979. Sterling lending by UK banks to these banks, which was restricted under exchange control, rose by £3 billion between October 1979 and June 1981, and on the other side of the balance sheet this was matched by an increase of the same amount in overseas banks' sterling deposits. Each is a manifestation of the growth of the Euro-sterling market and its closer integration now with the domestic interbank sterling market.

Appendix

The functioning of the ECU

Wolfgang Rieke

1. On December 5, 1978 the European Council, meeting in Brussels, adopted a Resolution establishing the European Monetary System (EMS). The Resolution stated that the European Currency Unit (ECU) "will be at the center of the system". The ECU is defined as a basket of currencies composed of specific amounts of all Community currencies (with the exception of the Greek drachma). On the entry into force of the EMS the ECU was equal in its composition to the former European Unit of Account (EUA), which was introduced in 1975. With effect from January 1, 1981 the ECU replaced the EUA in all its applications within the EEC.

   Originally, the shares of the individual currencies in the basket were fixed in accordance with the respective countries' shares in intra-Community trade, national product, and quotas in the EEC support mechanisms. The table below gives the components of the ECU basket and their weights. As fluctuations in exchange rates occur the relative weights of the component currencies in the basket are subject to constant change.
   Calculations of ECU values in each member currency are made as follows:

   > The central bank in each member state communicates at 2:30 p.m. a representative market exchange rate for its currency against the US dollar. The Commission uses these rates to calculate an ECU/EUA equivalent first in terms of dollar and then in the currencies of the member states. On July 31, 1981, the equivalent of 1 ECU/EUA in Deutschemark was DM 2,52297.

   The resolution of the European Council of December 5, 1978 provides for revisions in the ECU's composition every five years or, on request, if the weight of any currency has changed by 25 percent. Revisions are suggested upon mutual agreement, and are to be made in such manner as not to modify the external value of the ECU at the

Currencies	Amounts of currency	ECU[1] = . . . currency units March 13, 1979	ECU[1] = . . . currency units July 31, 1981	Percentage of total		
				March 13, 1979	July 31, 1981	June 28, 1974[1]
Deutschemark	0.828	2.51064	2.52297	33.0	32.8	27.3
French franc	1.15	5.79831	5.98467	19.8	19.2	19.5
Pound sterling	0.0885	0.663247	0.552238	13.3	16.1	17.5
Netherlands guilder	0.286	2.72077	2.80195	10.5	10.2	9.0
Belgian franc	3.66	39.4582	41.3326	9.6	8.9	8.2
Luxembourg franc	0.14		41.3326		0.3	
Italian lira	109.00	1,148.15	1,252.43	9.5	8.7	14.0
Danish krone	0.217	7.08592	7.92943	3.1	2.7	3.0
Irish pound	0.00759	0.662638	0.690297	1.2	1.1	1.5

[1] Percentages on the date the ECU was defined.

time of revision. As the underlying economic criteria remain the determining factors, such adjustments will not be made simply in proportion to the percentage of revaluation or devaluation of each individual currency's exchange rate.

Once the ECU achieves a more significant role in the private sector and/or vis-à-vis third countries, changes in its definition could pose problems similar to those of the SDR.

2. In the present initial stage of the EMS the key functions of the ECU are to serve as

(1) *numeraire* for expressing central rates,
(2) *denominator* for claims and liabilities vis-à-vis the European Monetary Cooperation Fund (EMCF) (claims and liabilities resulting from operations under the intervention and credit mechanisms, as well as reserve assets),
(3) basis for establishing a *divergence indicator* which measures exchange rate divergences from the ECU central rate of the respective currency,
(4) *means of settlement* between the monetary authorities of the European Economic Community as well as a *reserve asset* of EEC central banks.

The responsible national authorities of the participating countries, acting in agreement with their partners, have fixed a central rate for their currency in terms of the ECU. From these ECU central rates a "parity grid" of bilateral central rates is derived. The respective central banks are committed to defend these within agreed margins of fluctuation. Except for the Italian lira (which fluctuates within a margin of ± 6 percent) and the pound sterling (which fluctuates freely) the normal margin of fluctuation is $2^1/_4$ percent around the bilateral central rate. Changes in central rates are subject to the consent of all participants in the system. As a matter of convenience, adjustments in central rates have been made on the basis of bilateral revaluations or devaluations of certain currencies, and the calculation of ECU central rates has been carried out from the new bilateral central rates (incorporating imputed values for the pound sterling against the other member currencies). Since ECU central rates are linked with each other through their bilateral central rates a change in the ECU central rate of one currency necessarily leads to changes in the ECU central rates of the other currencies.

The creation of an *initial stock of ECUs* involves the transfer by each participating Community central bank of 20 percent of its gold

and dollar reserves to the EMCF. These transfers take the form of three-month revolving swaps against ECUs which are to be unwound at the end of the initial stage. For the purpose of these swap transactions gold is valued at the average of the daily market price in dollars quoted in London over the past six months but no higher than the average price of the two fixing rates of the second but last business day of the period in question.

ECUs thus created may be used for settlement of 50 percent or more (upon mutual agreement) of any debtor balances arising from intervention within the EMS. To this purpose the amounts of a partner currency supplied for intervention under the very short-term financing operations are converted into ECUs at the ECU daily rate and entered in the accounts of the EMCF.

The resultant creditor balances can be used multilaterally by the creditor central banks concerned; they can be transferred to any other central bank participating in the exchange rate system in settlement of outstanding intervention liabilities. Interest is paid on the balances at a rate corresponding to the weighted average of the official discount rates of all Community central banks.

The ECU has so far performed these various functions satisfactorily, even if certain limitations in the working of the divergence indicator have come to light. Its role as an instrument for intra-Community settlements, however, is restricted in certain respects. First, settlements in ECUs, unlike settlements in reserve assets denominated in SDRs or US dollars, are not final, for the reasons explained below. Secondly, within the strict meaning of the Agreement, the right to use ECU holdings is limited to the settlement of debts financed through the EMCF and incurred as a result of mandatory interventions at the intervention points in the exchange rate mechanism, and then only up to 50 percent of the amounts involved. This acceptance limit for ECUs is designed to protect the interest of persistent creditor countries within the EMS that may need to use reserves for settlement vis-à-vis third countries. In the case of intramarginal interventions, the extent ECUs can be used for same-day settlement of intervention balances depends on arrangements agreed between the parties directly concerned. In the past, settlement in ECUs has substantially exceeded the volume that creditors were obliged to accept under the existing EMS rules.

Nevertheless, the ECU has become a reserve asset in its own right only to a very limited degree. This results from the fact that ECUs have been created against swaps, and ECUs accumulated by a central bank in excess of its reserve contributions are of a "precarious" nature, due to the obligation on net users of ECUs to reconstitute their original

holdings by purchasing ECUs from the central banks that are net accumulators.

3. The Resolution of December 1978 envisages as crowning elements of a final "institutional phase" of the EMS the establishment of a European Monetary Fund (EMF) and full utilization of the ECU as a reserve asset and means of settlement.

   The creation of ECUs in the context of an EMF raises important issues relating to its money-creating powers and the safeguards (checks and balances) required. At present, the creation of ECUs depends largely on pre-set rules which do, however, contain elements of automatism that are subject to criticism (mainly the impact on the volume of ECUs outstanding of fluctuations in dollar exchange rates and even more so, of the dollar price of gold). It is generally agreed that in the final system the volume of ECUs created must correspond more closely to certain basic aims of the EMS, especially the achievement of greater external and internal monetary stability, as well as enhance the ECU's attractiveness as a reserve asset and monetary instrument of potential use outside the circle of EMS central banks.

4. From the viewpoint of private investors and borrowers the role of the ECU is at present closely circumscribed.

   Legal difficulties inhibit the use of the ECU even in its present limited role as a unit of account in certain countries. These problems arise, for example, from the existence of

   (a) exchange controls;
   (b) limitations in regard to banks' open foreign currency positions (such as those in Germany) that would apply to banks dealing in ECUs;
   (c) monetary and credit controls;
   (d) national laws of contract or other legislation which effectively restrict the use of the ECU.

   It is doubtful to what extent the ECU could provide a satisfactory means of reducing exchange rate risks or hedging costs in international trade, or even in intra-Community transactions in current circumstances, given the existence of such constraints. Nevertheless, the fact that the ECU cannot at present be used as a means of settlement does not preclude commercial contracts being drawn up involving the ECU as a unit of account. But it does mean that ECU operations have at some point to be broken down into the component currencies, whether this be for settlements, loans, deposits or forward cover. The complexity of the procedures involved is unlikely to encourage commercial firms to change their invoicing practices.

Even though the exchange rate risks may be reduced as compared with the use of individual national currencies, maintaining an ECU account or making payments in ECU still involves exchange rate risks. Despite these obvious problems, a number of European banks at present operate ECU accounts, though again the ECU is still only used as an accounting device. Thus, payments transfers in ECU, whether national or international, will in practice be effected in one or more of the component currencies. This procedure is laborious and costly and will tend to cause the bank's lending rate (deposit rate) to be higher (lower) than the weighted average of the interest cost (yield) on the individual currencies.

In order to achieve wider use of the ECU in banking transactions it would seem essential that the following legal conditions exist:

(1) The ECU is fully convertible;
(2) Residents of each Community country are free to hold ECU-denominated bank accounts as well as ECU denominated securities;
(3) The ECU must be capable of being used as a unit of account in commercial contracts.

The Deutschemark as a Reserve and Investment Currency

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TABLE 1

Currency Composition of Foreign Exchange Reserves*
End of Selected Quarters, 1973-80[1]
(in percent)

	1973:I	1975:IV	1976:IV	1977:IV	1977:IV	1979:IV	1980:IV	1979:IV Excluding ECU[2]	1980:IV Excluding ECU[2, 3]
U.S. dollar	84.5	85.4	87.0	85.7	83.5	66.5[4]	60.9[5]	78.9	74.7
Pound sterling	5.9	4.0	2.1	1.8	1.6	1.9	2.4	2.0	2.6
Deutshemark	6.7	6.5	7.1	8.0	9.6	10.3	11.5	11.3	13.2
French franc	1.2	1.3	1.0	0.8	1.0	0.9	1.0	1.0	1.2
Swiss franc	1.4	1.6	1.6	2.1	2.0	2.9	3.3	3.2	3.8
Netherlands guilder	0.4	0.6	0.5	0.4	0.5	0.6	0.7	0.7	0.9
Japanese yen	—	0.6	0.7	1.1	1.8	2.6	3.0	2.8	3.5
ECU	—	—	—	—	—	14.3[4]	17.2[5]	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Various Fund publications and Fund staff estimates.

* Share of National Currencies in SDR Value of Total Official Holdings of Foreign Exchange.

[1] The detail in each of the columns may not add to 100 because of rounding.

[2] In this alternative calculation, the SDR value of European Currency Units (ECUs) issued against U.S. dollars (SDR 12,784 million at the end of 1979 and SDR 10,176 million at the end of 1980) is added to the SDR value of U.S. dollars, but the SDR value of ECUs issued against gold (SDR 19,725 million at the end of 1979 and SDR 37,354 million at the end of 1980) is excluded from the total distributed here.

[3] The five-currency basket SDR has weights of 42 percent for the U.S. dollar, 19 percent for the Deutschemark, and 13 percent for each of the pound sterling, the French franc, and the Japanese yen.

[4] The share of U.S. dollars would rise by 5.8 percentage points and that of the ECU would fall by the same amount if ECUs issued against U.S. dollars were treated as U.S. dollars in foreign exchange reserves.

[5] The share of U.S. dollars would rise by 3.8 percentage points and that of the ECU would fall by the same amount if ECUs issued against U.S. dollars were treated as U.S. dollars in foreign exchange reserves.

Sources: IMF Annual Report 1981, as revised by Bundesbank on the basis of more recent Fund staff estimates.

TABLE 2

Development of International Bank Claims
(by Currency)[1]

Position at end	All currencies US-$ billion	Among which, in percent									
		US-$	DM	£	SwFr	FF	Yen[2]	Dfl	Bfr.	Lit	Other[3]
1974 March	320.89	71.8	14.0	1.6	8.0	1.2	0.3	0.8	0.7	0.4	1.2
June	342.40	72.6	13.8	1.5	7.7	0.9	0.4	0.7	0.8	0.4	1.2
Sept.	334.88	73.7	13.3	1.4	7.0	0.8	0.4	1.2	0.8	0.3	1.2
Dec. I	357.77	72.7	14.7	1.3	7.0	0.8	0.4	0.9	0.8	0.3	1.2
Dec. II	360.21	72.3	14.7	1.2	7.0	0.8	0.4	1.3	0.8	0.3	1.2
1975 March	375.34	71.2	15.9	1.2	6.7	0.9	0.4	1.4	0.8	0.3	1.2
June	396.78	71.7	15.5	1.4	6.5	1.0	0.3	1.4	0.8	0.3	1.2
Sept.	410.43	72.9	15.1	1.2	6.1	0.9	0.3	1.5	0.7	0.3	1.4
Dec.	441.44	73.2	15.3	1.0	6.0	0.9	0.3	1.3	0.7	0.2	1.0
1976 March	458.77	72.7	15.5	1.0	6.1	0.8	0.4	1.4	0.7	0.2	1.1
June	477.31	73.7	14.4	1.0	6.2	0.8	0.4	1.4	0.7	0.2	1.2
Sept.	500.84	73.2	14.7	1.0	6.2	0.8	0.4	1.5	1.0	0.2	1.2
Dec.	548.02	73.8	14.9	0.8	5.7	0.8	0.4	1.5	0.8	0.1	1.2
1977 March	546.89	73.7	14.5	0.9	5.8	0.8	0.4	1.6	0.8	0.1	1.3
June	572.04	73.0	15.0	0.9	5.8	0.9	0.4	1.7	0.9	0.1	1.3
Sept.	590.67	72.6	14.8	1.0	6.0	1.0	0.5	1.6	0.9	0.1	1.4

	Dec. I	657.25	71.2	16.4	1.0	6.1	0.9	0.5	1.5	0.9	0.1	1.3
	Dec. II[4]	689.67	68.6	16.0	2.5[5]	5.9	2.2[6]	0.8	1.5	0.9	0.1	1.6
1978	March	711.26	67.4	16.2	2.6	6.2	2.5	1.1	1.6	0.9	0.1	1.5
	June	736.31	67.7	15.2	2.7	6.2	2.7	1.3	1.7	0.8	0.2	1.5
	Sept.	803.63	66.3	15.7	2.7	6.9	2.7	1.5	1.8	0.8	0.2	1.4
	Dec. I	904.68	66.9	16.5	2.5	5.6	2.7	1.5	1.8	0.8	0.2	1.5
	Dec. II	893.10	66.5	16.7	2.6	5.7	2.7	1.5	1.8	0.8	0.2	1.5
1979	March	883.50	65.8	16.4	2.7	5.7	2.9	1.7	2.0	0.9	0.2	1.6
	June	946.48	65.3	16.8	2.6	6.3	2.8	1.7	1.9	0.8	0.2	1.7
	Sept.	1.041.50	65.4	16.6	2.5	6.6	2.8	1.6	1.9	0.9	0.2	1.7
	Dec.	1.110.67	65.7	16.5	2.5	6.3	2.9	1.6	1.9	0.9	0.2	1.5
1980	March	1.117.41	66.9	15.5	2.6	6.2	2.8	1.8	1.7	0.9	0.2	1.5
	June I	1.205.87	65.1	16.1	2.8	6.6	2.9	2.0	1.7	1.0	0.2	1.6
	June II	1.206.23	65.1	16.1	2.8	6.6	2.9	2.0	1.7	1.0	0.2	1.6
	Sept.	1.248.06	66.0	15.3	2.8	6.6	2.9	2.1	1.6	0.9	0.2	1.5
	Dec.	1.321.92	67.6	14.3	2.8	6.3	2.8	2.1	1.5	0.8	0.2	1.5
1981	March I	1.346.72	68.3	13.8	2.8	6.4	2.7	2.2	1.5	0.7	0.2	1.4
	March II	1.348.80	68.4	13.8	2.8	6.4	2.7	2.2	1.5	0.7	0.2	1.4
	June	1.346.66	70.5	12.3	2.6	6.4	2.3	2.3	1.4	0.6	0.2	1.4

Source: BIS, Statistics of Euro-currency and other International Banking, Federal Reserve Bulletin

[1] External assets in domestic and foreign currencies of banks in countries reporting to the BIS (including banks in the U.S. and foreign branches of U.S. banks in certain offshore financial centers).

[2] Excluding Yen assets of Swiss banks.

[3] Including Yen assets of Swiss banks.

[4] From December 1977 including banks in Austria, Denmark and Ireland.

[5] From December 1977 including all commercial bills and acceptances.

[6] From December 1977 including buyers' credits to foreign importers.

TABLE 3

Composition of Foreign Exchange Reserves by Country Groups

First quarter of 1980 in percent[1]

	All countries	Industrial countries		Oil exporting Others	Non-oil countries	LDCs
		All	EMS			
Dollar	78.1	87.2	90.2	82.7	67.0	67.6
Pound sterling	2.3	0.7	0.5	1.1	2.9	5.5
Deutschemark	11.7	6.9	5.7	9.0	16.7	17.6
French franc	1.0	—	—	—	2.2	2.3
Swiss franc	3.1	2.7	2.9	2.7	5.1	1.9
Dutch guilder	0.7	0.4	0.5	—	1.1	1.5
Japanese yen	3.1	1.9	0.2	4.5	4.8	3.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

[1] *Source:* IMF. Average levels of foreign exchange reserves expressed in SDRs and excluding ECUs (the value of ECUs issued against gold is excluded and the value of ECUs issued against dollars is added to the value of dollar holdings).

TABLE 4

Total Official and Private Deutschemark Claims Held by Non-residents*

(in DM billion)

End of	Cross-border DM claims of non-residents on banks outside Germany	External DM bonds held by non-residents	Total cross-border claims on external DM markets held by non-residents (1) + (2)	Other DM claims on Germany held by non-residents	Total cross-border claims in DM held by non-residents (3) + (4)
	(1)	(2)	(3)	(4)	(5)
1970	23.9	9.8	33.7	...	...
1971	43.9	14.1	57.1	...	...
1972	57.7	22.3	80.0	...	...
1973	77.7	25.1	102.8	...	...
1974	69.9	25.0	94.9	90.2	185.1
1975	82.7	30.3	113.0	105.3	218.3
1976	90.1	36.5	126.6	122.3	248.9
1977	124.2	43.9	168.1	144.7	312.8
1978	152.8	50.3	203.1	177.3	380.4
1979	201.8	55.9	257.7	202.8	460.5
1980	217.5	58.9	276.4	251.6	528.0
June 1981	218.7	57.1	275.8	289.9	565.7

Sources: IMF, Bundesbank, BIS
Details see other tables

* In this table: non-residents = non-residents of Germany.

TABLE 5

Overall Statistically Recorded Deutschemark Assets and Total Foreign Exchange Reserves of Monetary Authorities

End of	Deutschemark assets in Germany		Deutschemark assets in the Euromarket[1]		Total Deutschemark assets		Foreign exchange reserves				*Pro memoria:* Official Euro-currency holdings[2] (BIS debtor statistics)[3]		
							Total	Excl. ECUs against gold		of which Euro-currency holdings	Total[4]	of which Deutschemark assets	
	DM billion	US$[5] billion	DM billion	US$ billion	DM billion	US$ billion	US$ billion	US$ billion	Excl. reserve holdings of Bundesbank US$ billion	US$ billion	US$ billion	US$ billion	DM billion
1975	7.7	2.9	17.5	6.7	25.2	9.6	160.9	160.9	138.2	52.6	52.4	7.6	20.0
1976	11.5	4.9	17.0	7.2	28.5	12.1	186.3	186.3	160.8	61.3	64.0	8.3	19.7
1977	14.8	7.0	23.2	11.0	38.0	18.1	245.7	245.7	215.0	79.9	75.4	12.0	25.2
1978	20.5	11.2	26.4	14.5	46.9	25.7	289.7	289.7	247.4	82.9	85.8	16.8	30.7
1979	24.6	14.2	27.7	16.0	52.3	30.2	326.5	300.6	260.5	86.2	121.4	24.1	41.7
1980	42.0	21.4	38.5	19.6	80.5	41.1	376.0	328.3	297.7	98.5	128.0	24.5	47.9
1981 June	42.4	17.7					356.5	316.7	283.1	101.6	113.9	18.4	43.9

Source: International Monetary Fund, Creditor Statistics: International Financial Statistics, IMF Survey, Monthly Report on Balance of Payments Developments, and other unpublished data.

[1] Including unknown holdings of external Deutschemark bonds.
[2] With banks in countries reporting to the BIS.
[3] Bank for international Settlement: Quarterly press release on International banking developments.
[4] Including foreign branches of US banks in certain offshore financial centers.
[5] Dollar figures are DM equivalents in U.S. currency.

TABLE 6

Various Shares of DM Holdings in Official Portfolios

(in percent)[1]

	Excluding ECUs issued against gold[2]						Including ECUs issued against gold	
	1975	1976	1977	1978	1979	1980	1979	1980
I. Based on official holdings of								
All countries	6.0	6.5	7.4	8.9	10.1	12.5	9.3	10.9
All countries excl. Germany[3]	7.0	7.5	8.4	10.4	11.6	13.8	10.8	12.4
II. Based on official holdings excl. an undistributed residual[4]								
All countries	6.5	7.1	8.0	9.6	11.3	13.2	10.3	11.5
All countries excl. Germany	7.6	8.3	9.2	11.5	13.4	14.6	12.4	13.0

Source: International Monetary Fund and Bundesbank estimates.

[1] Absolute figures see Table 5.
[2] Since 1979 reduction of the amount of total official holdings of foreign exchange by the total value of ECUs issued against gold.
[3] i.e. after deduction of the official reserve holdings of the Deutsche Bundesbank.
[4] The "undistributed residual" comprises reserves reported to the IMF in minor currencies and reserves whose currency composition is not fully identified.

TABLE 7

Outstanding Deutschemark-denominated Bonds Placed in Germany and Abroad

(billions of Deutschemark)

Amount outstanding at end of	Domestic issues						Foreign DM issues[4]		
	Total placed in Germany and abroad[1]	Among which bonds placed abroad					Total placed in Germany and abroad	Of which placed with non-residents	
		Total[2]	in %	Issued by banks	Issued by public sector	Issued by enterprises[3]		net	in %
Dec. 1970	155.1	5.1	3.3	1.9	1.3	1.9	19.4	9.8	50.5
Dec. 1971	176.2	6.7	4.0	2.9	1.5	2.3	22.7	14.1	62.1
Dec. 1972	210.9	14.4	6.8	8.0	2.2	4.2	26.7	22.3	83.5
Dec. 1973	237.2	21.1	8.9	14.7	2.7	3.7	29.3	25.1	85.7
June 1974	245.2	21.6	8.8	15.9	2.6	3.1	29.0	..	
Dec. 1974	263.2	18.7	7.1	13.6	2.4	2.7	29.9	25.0	83.6
June 1975	291.2	17.3	5.9	12.5	2.5	2.3	35.1	..	
Dec. 1975	311.9	15.3	4.9	12.1	1.8	1.4	35.9	30.3	84.4
June 1976	336.8	16.2	4.8	11.5	3.0	1.8	39.3	..	
Dec. 1976	360.1	18.5	5.1	11.5	4.8	2.3	42.6	36.5	85.7
June 1977	383.9	17.9	4.7	10.8	5.1	2.0	47.8	..	
Dec. 1977	411.3	19.3	4.7	10.9	6.3	2.1	52.9	43.9	83.0

June 1978	436.9	19.3	4.4	9.8	7.2	2.3	59.0	47.7	80.8
Dec. 1978	452.2	19.6	4.3	9.0	7.9	2.7	63.2	50.3	79.6
June 1979	474.4	19.3	4.1	8.0	8.6	2.6	65.4	52.5	80.3
Dec. 1979	494.4	23.7	4.8	9.4	11.4	3.0	70.1	55.9	79.7
June 1980	527.7	24.4	4.6	9.2	12.0	3.2	74.9	57.3	76.5
Dec. 1980	540.5	24.0	4.4	9.1	11.8	3.1	79.2	58.9	74.4
June 1981	582.7	24.3	4.2	9.4	11.7	3.1	78.1	57.1	73.1

Source: Deutsche Bundesbank

[1] Face value, excluding holdings by issuers.
[2] Cumulated transaction values; face values are probably in general slightly higher.
[3] Including Federal Railways and Federal Post Office.
[4] Floated by German-managed syndicates.

TABLE 8

Development of Euro-Deutschemark Currency Market[1]

(in percent)

Position of reporting banks	End of period								June
	1967	1970	1975	1976	1977	1978	1979	1980	1981
DM claims of international banks									
Total									
in billions of DM	**8.3**	**37.2**	**112.2**	**118.7**	**151.7**	**182.7**	**220.5**	**247.4**	**267.8**
(in billions of US$)	*2.1*	*10.2*	*42.8*	*50.2*	*72.1*	*99.9*	*127.3*	*126.3*	*112.0*)
				Percentage Shares					
On Germany		**50.1**	**31.8**	**33.2**	**34.4**	**34.0**	**31.1**	**35.2**	**38.6**
Banks		32.8	13.3	15.1	14.8	15.6	16.8	15.4	15.9
Non-banks		17.3	18.4	18.1	19.7	18.3	14.3	19.8	22.7
On other countries[2]		**49.9**	**68.2**	**66.8**	**65.6**	**66.0**	**68.9**	**64.8**	**61.4**
Banks		40.0[3]	49.9	50.1	51.7	52.2	55.3	52.5	49.7
Non-banks		9.9	16.8	14.9	13.0	12.7	12.7	11.6	11.1
Monetary institutions		..	1.5	1.8	0.9	1.1	0.9	0.7	0.6

DM liabilities of international banks

Total									
in billions of DM	**6.8**	**29.8**	**107.0**	**114.0**	**146.9**	**173.3**	**225.5**	**252.2**	**255.3**
(in billions of US$)	*1.7*	*8.2*	*40.8*	*48.3*	*69.8*	*94.8*	*130.3*	*128.7*	*106.8*)
				Percentage Shares					
To Germany		**19.7**	**22.7**	**20.9**	**15.5**	**11.8**	**10.5**	**13.8**	**14.4**
Banks		17.2	21.4	18.3	13.5	10.1	8.9	11.2	10.7
Non-banks		2.5	1.3	2.6	2.0	1.8	1.7	2.6	3.6
To other countries[2]		**80.3**	**77.3**	**79.1**	**84.5**	**88.2**	**89.5**	**86.2**	**85.6**
Banks		66.9[3]	51.6	54.5	60.4	63.0	64.5	61.0	62.3
Non-banks		13.4	7.0	7.0	7.0	7.4	6.5	6.2	6.2
Monetary institutions		. .	18.7	17.3	17.1	17.7	18.5	19.0	17.2

Source: BIS, Statistics of Euro-currency and other international banking.

[1] Assets and liabilities of banks in 12 European countries (Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom), Canada and Japan. Austria, Denmark and Ireland are included from December 1977 onwards.
[2] Excluding Euro-Mark-positions vis-à-vis residents in reporting countries.
[3] Including Euro-Mark-positions of the reporting banks vis-à-vis official monetary institutions.

TABLE 9

Foreign Deutschemark Assets in Germany*

(billions of Deutschemark)

Item	1974		1975		1976		1977		1978		1979		1980		1981
	Mid	End	Mid	End	Mid	End	Mid	End	Mid	End	Mid	End	Mid	End	Mid
In the German banking system															
(a) Bundesbank	1.5	2.2	1.5	1.9	2.0	2.4	2.1	2.0	2.9	6.9	6.0	5.0	4.5	10.2	14.1
(b) Banks[1]															
Short-term[2]	19.7	19.7	19.3	26.6	24.8	27.6	26.3	33.5	28.2	42.0	35.9	43.4	38.2	43.3	43.1
Long-term															
Financial credits	5.9	6.6	6.0	7.6	9.5	11.6	12.9	15.7	21.7	29.6	38.3	48.7	53.6	54.1	54.2
Bonds	15.9	13.6	12.5	12.1	11.5	11.5	10.8	10.9	9.8	9.0	8.0	9.4	9.2	9.1	9.4
Total	41.5	39.9	37.7	46.2	45.7	50.7	50.1	60.0	59.7	80.6	82.2	101.5	101.0	106.4	106.7
Total	42.9	42.1	39.2	48.1	47.7	53.1	52.2	62.0	62.6	87.4	88.2	106.5	105.5	116.6	120.8
With enterprises and individuals															
Short-term															
Financial credits	8.2	10.6	13.3	13.5	16.2	13.9	16.7	21.6	21.0	22.7	22.2	20.3	33.1	33.0	43.3
Trade credits in the form of advance payments	9.7	12.4	14.1	14.9	16.7	16.8	17.6	18.2	19.7	18.8	20.6	20.7	21.2	19.9	22.5
Other assets[2]	—	—	0.1	0.0	0.0			0.1	0.2	0.1	0.1	0.1	—	—	0.3
Total	17.9	23.0	27.5	28.5	32.9	30.8	34.4	39.9	40.8	41.6	42.9	41.0	54.3	52.8	65.8

Long-term															
Financial credits	9.9	10.1	10.7	10.8	10.7	11.0	11.9	12.5	12.6	13.2	13.4	14.5	15.6	18.5	21.5
Portfolio investment															
Shares[3]	6.7	6.8	8.0	8.6	9.4	10.3	11.1	11.9	13.1	14.9	15.5	16.7	16.7	17.3	17.8
Bonds[4]	3.1	2.7	2.3	1.4	1.8	2.3	2.0	2.1	2.3	2.7	2.6	3.0	3.2	3.1	3.1
Total	19.8	19.6	21.0	20.8	21.9	23.5	25.0	26.4	28.1	30.8	31.5	34.2	35.5	38.9	42.4
Total	37.7	42.5	48.5	49.3	54.8	54.2	59.3	66.3	68.9	72.4	74.4	75.2	89.8	91.8	108.2
With public authorities[5]															
Long-term															
Financial credits[6]	0.8	1.9	1.7	4.7	6.8	8.9	9.2	8.7	8.7	8.1	8.2	8.0	16.7	29.6	43.5
Bonds	2.6	2.4	2.5	1.8	3.0	4.8	5.1	6.3	7.2	7.9	8.6	11.4	12.0	11.8	11.7
Total	3.4	4.3	4.2	6.5	9.7	13.7	14.3	15.1	15.9	16.0	16.8	19.4	28.8	41.3	57.6
Deutschemark notes[7]	1.8	1.3	2.0	1.4	2.1	1.3	2.3	1.4	2.4	1.5	2.7	1.7	2.9	1.9	3.3
Total	85.8	90.2	94.0	105.3	114.3	122.3	128.2	144.7	149.8	177.3	182.1	202.8	226.9	251.6	289.9

Source: Deutsche Bundesbank

* Excluding direct investment, other capital holdings, periods allowed for payment in foreign trade, and real estate; partly estimated.
[1] Classified in accordance with the banking statistics.
[2] Excluding liabilities arising from undistributed profits.
[3] Including investment in German bank shares.
[4] Including bond issues of the Federal Railways and Federal Post Office.
[5] Excluding short-term liabilities, but including U.S. investment in Federal Government borrowers' notes.
[6] Including U.S. investment in Federal Government borrowers' notes.
[7] Deutschemark notes held by foreigners (estimated).
(Discrepancies in the totals are due to rounding.)

TABLE 10

Statistically Recorded Deutschemark Assets of Foreign Monetary Authorities in Germany

(billions of Deutschemarks)

End of year or quarter	IMF creditor data	Statistically identified by Deutsche Bundesbank					Discrepancy[1]	Pro memoria: *Net DM borrowing* by public sector in Germany (in year or quarter respectively)	
		Total	With Bundesbank		Deposits with banks			Total	Among which from OPEC countries and U.S.A.[2]
			Deposits	Mobilization and liquidity paper	Short-term (1 year or less)	Medium and long-term			
1970	4.7	4.1	0.2	1.9	2.0	0.1	0.0		
1974	6.9	2.6	0.7	0.8	1.1	0.0	4.3	+ 1.2	+0.4
1975	7.7	3.3	0.3	1.0	1.5	0.6	4.4	+ 3.5	+1.5
1976	11.5	4.1	0.2	1.4	1.4	1.1	7.3	+ 4.3	+1.1
1977	14.8	6.1	0.2	1.1	3.6	1.2	8.8	− 0.2	+0.6
1978	20.5	12.4	3.9	2.2	3.7	2.7	8.1	− 0.6	−0.8
1979	24.6	10.5	2.2	1.6	3.0	3.6	14.1	+ 0.3	−0.1
1980 March	29.2	11.9	2.7	1.7	3.4	41.	17.3	+ 5.5	+5.4
June	30.5	11.8	1.5	1.9	3.7	4.6	18.7	+ 3.3	+2.6
Sept.	35.0	12.3	2.0	2.0	3.7	4.6	22.7	+ 3.4	+2.2
Dec.	42.0	18.9	6.8	2.4	4.8	4.9	23.1	+10.3	+7.4
1981 March	42.6	21.4	9.6	3.4	3.3	5.1	21.2	+ 8.6	+7.2
June	42.4	21.0	9.8	3.3	2.6	5.2	21.4	+ 6.8	+5.3

Sources: IMF, Deutsche Bundesbank.

[1] Mainly holdings in domestic Deutschemark bonds and public sector borrowers' notes of indebtedness.
[2] Assuming that most of these borrowings constitute increases of official and quasi-official reserves.

TABLE 11

Newly Arisen German Export Claims by Currency
(On the basis of quarterly averages in percent)

Period	DM	US$	£	SwFr	FF	BFr	hfl	Lit	Other[1]
1972	84.1	6.5	1.2	1.0	2.6	0.8	1.2	1.2	1.4
1973	85.5	5.3	1.1	0.9	2.6	0.7	1.2	1.1	1.6
1974	88.3	3.8	0.9	0.8	2.2	0.7	1.1	0.8	1.4
1975	89.2	4.4	0.9	0.5	1.7	0.6	0.9	0.7	1.1
1976	86.9	5.0	1.2	0.6	2.1	0.7	0.9	1.1	1.5
1977	86.0	6.2	1.1	0.5	2.1	0.7	0.9	1.0	1.5
1978	83.6	7.4	1.3	0.5	2.3	0.8	1.1	1.0	2.0
1979	82.6	7.3	1.5	0.5	2.6	0.8	1.1	1.3	2.4
1980	82.5	7.2	1.4	0.5	2.8	0.9	1.2	1.3	2.2
1980 I	81.6	7.6	1.5	0.5	2.8	0.9	1.2	1.6	2.3
II	82.5	7.0	1.6	0.5	2.8	1.0	1.2	1.4	2.0
III	82.8	7.1	1.3	0.5	2.8	0.9	1.2	1.1	2.3
IV	83.2	7.1	1.2	0.5	2.6	0.8	1.1	1.2	2.3
1981 I	81.6	7.9	1.3	0.5	2.9	0.9	1.2	1.4	2.3
II	82.2	7.9	1.2	0.4	2.7	0.9	1.1	1.3	2.3

Source: Deutsche Bundesbank

[1] A more detailed breakdown is not possible.

TABLE 12

German Import Payments by Currency
(On the basis of quarterly averages in percent)

Period	DM	US$	£	SwFr	FF	BFr	hfl	Lit	Other[1]
1972	49.9	18.6	4.9	1.9	4.3	2.2	3.4	7.5	7.3
1973	.	.	.	.	.	.	.	.	.
1974	42.2	28.3	4.8	1.7	4.2	2.2	3.0	3.2	10.4
1975	42.5	30.9	3.6	1.7	4.2	1.8	2.6	2.7	10.0
1976	42.0	31.3	3.2	1.7	3.9	1.7	2.5	3.1	10.6
1977	44.2	30.6	3.0	1.7	3.7	1.7	2.3	2.1	10.7
1978	46.1	28.5	3.3	2.1	3.7	1.7	2.4	2.4	9.8
1979	43.7	30.5	3.2	1.7	3.4	1.7	2.1	2.9	10.8
1980	43.1	32.3	3.3	1.6	3.3	1.6	2.0	2.4	10.4
1980 I	43.5	33.5	3.2	1.7	3.3	1.9	2.2	2.7	8.0
II	42.2	33.9	3.0	1.4	3.3	1.5	2.0	1.8	10.9
III	42.7	31.8	3.1	1.5	3.2	1.6	1.9	2.8	11.4
IV	43.8	30.1	4.1	1.8	3.2	1.5	1.8	2.3	11.4
1981 I	42.7	34.1	3.5	1.9	3.3	1.2	2.0	2.1	9.2
II	43.0	32.2	3.0	1.6	2.9	1.3	2.1	2.2	11.7

Source: Deutsche Bundesbank

[1] A more detailed breakdown is not possible.

TABLE 13

Major Items of Germany's Balance of Payments
(billions of Deutschemark)

	1973	1974	1975	1976	1977	1978	1979	1980	First half 1981
A) Current account									
Foreign trade	+33.0	+50.8	+37.3	+34.5	+38.4	+41.2	+22.4	+ 8.9	+ 6.4
Balance	+12.3	+26.6	+ 9.9	+ 9.9	+ 9.5	+18.4	− 9.6	−29.8	−14.5
B) Private capital transactions									
Long-term capital exports	− 0.7	− 9.5	−21.9	−17.6	−20.9	−20.9	−18.7	−27.4	−12.0
Long-term capital imports	+15.9	+ 4.1	+ 2.5	+13.7	+ 9.6	+21.2	+31.0	+12.9	+ 6.9
Short-term capital transactions	+ 0.0	−19.0	+ 4.3	+ 1.0	+12.7	+ 7.2	− 0.6	− 0.8	+10.3
Banks	(− 5.1)	(− 9.7)	(− 2.3)	(+ 6.7)	(+ 8.1)	(+10.1)	(+ 4.3)	(− 9.3)	(+ 1.9)
Enterprises and individuals	(+ 5.2)	(− 9.3)	(+ 6.5)	(− 5.7)	(+ 4.6)	(+ 2.9)	(− 5.0)	(+ 8.5)	(+ 8.3)
of which trade credits	(+ 4.6)	(−12.4)	(+ 4.1)	(− 5.7)	(− 3.9)	(− 3.9)	(− 1.7)	(− 4.8)	(− 3.3)
of which financial credits	(+ 0.6)	(+ 3.1)	(+ 2.5)	(− 0.0)	(+ 8.5)	(+ 1.1)	(− 3.2)	(+13.3)	(+11.9)
Balance	+15.2	−24.4	−15.1	− 2.9	+ 1.4	+ 7.6	+11.7	−15.3	+ 5.2
C) Official capital transactions									
Long-term	− 2.2	− 0.9	+ 1.2	+ 2.4	− 1.6	− 3.3	− 1.5	+21.4	+12.8
Short-term	+ 0.3	− 0.0	+ 0.7	− 0.6	− 0.0	+ 1.2	− 0.3	− 0.4	+ 1.5
Balance	− 2.0	− 0.9	+ 1.8	+ 1.8	− 1.7	− 2.1	− 1.8	+21.0	+14.3

D) Balance of unclassifiable transactions	+ 0.9	− 3.2	+ 1.1	− 0.1	+ 1.2	− 4.1	− 5.2	− 3.7	+ 2.2
Overall balance on current and capital accounts	+26.4	− 1.9	− 2.2	+ 8.8	+10.5	+19.8	− 5.0	−27.9	+ 7.2
Change in the net external assets of the Bundesbank (increase: +)	+16.1	− 9.1	+ 3.3	+ 1.3	+ 2.6	+12.2	− 7.3	−25.7	+ 6.8

Source: Deutsche Bundesbank, Monthly Reports and Statistical Supplements, Series 3.

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The Group of Thirty was established in December 1978, to explore basic problems in the functioning of the international economic system. It meets twice a year, for two to three days at a time. Between these meetings, study groups and researchers gather material to serve as a basis for the Group's discussions.

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Group of Thirty

How Central Banks Manage Their Reserves

A study by the Office of the Group of Thirty on behalf of the Multiple Reserve Currency Study Group

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How Central Banks Manage Their Reserves

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How Central Banks Manage Their Reserves

PREFACE

This report on reserve currency diversification has been undertaken by the Group of Thirty in cooperation with central banks holding more than half of the world's foreign exchange reserves. The aim is to shed new light on a development of considerable importance to the international financial system — the evolution of a multiple currency reserve system.

The move to a *de facto* multiple currency reserve system (MCRS) has far-reaching implications for the authorities in the older and newer reserve centers as well as for those who are diversifying their reserves. Central banks in each of these categories are among those who have contributed to the study. The Group of Thirty hopes that the study it has undertaken may contribute to a clearer appreciation of the benefits and drawbacks of the process. This in turn may help both central banks and international institutions in their quest for policies of the greatest practical benefit to the international financial system.

The report is based on central banks' replies to questions that were drawn up by a study group under Dr. H.J. Witteveen, chairman of the Group of Thirty and former managing director of the IMF. The membership of the study group is shown on the title page. As in the case of previous surveys by the Group of Thirty, respondents were promised absolute confidentiality; answers were seen by the staff of the Group alone.

This study is published in conjunction with a booklet, "Reserve Currencies in Transition" consisting of essays by Dr. Wolfgang Rieke of the German Bundesbank, Mr. Michiya Matsukawa of Nikko Securities, Dr. Fritz Leutwiler and Dr. René Kästli of the Swiss National Bank and Mr. Christ-

opher McMahon of the Bank of England. The booklet contains an introductory article by Mr. Robert V. Roosa, a partner in Brown Brothers Harriman and a former Under Secretary for Monetary Affairs at the US Treasury. In his article, Mr. Roosa discusses the background to the evolution of the multiple currency system and explores various approaches to reducing its possible instability. The article draws on extensive discussions of these topics at meetings of the study group.

The Group of Thirty wishes to express its thanks to the central banks that participated in the study; and to Mr. M.S. Mendelsohn, who took the leading role in compiling the report. Final responsibility for the report remains, however, with the undersigned.

April, 1982

Robert Pringle
Executive Director
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How Central Banks Manage Their Reserves

Summary of the Report

Although the world has been moving towards a multicurrency reserve asset system during the past decade, this is the first study of its kind to examine the extent of that shift, its possible growth and its implications for the older and newer reserve centers, for reserve holders, and for the stability or otherwise of the international financial system.

The study breaks new ground in being the first to be based on the evidence and views of central banks themselves, in answers to a questionnaire supplemented, in some cases, by interviews. The 22 central banks which cooperated in the study hold more than half of the world's total of about $350 billion of foreign exchange reserves. They include the monetary authorities of most of the Group of Ten countries* and of the most important oil exporting countries as well as central banks of smaller industrial countries, NICs (or Newer Industrialized Countries) and a number of non-oil LDCs. The study has been supplemented by interviews with 12 international commercial and investment banks, because a large proportion of official reserves and other official foreign exchange holdings are placed with such banks in the leading domestic money markets and the

* The Group of Ten countries are the United States, the United Kingdom, Japan, Germany, France, Italy, the Netherlands, Belgium, Canada and Sweden. Switzerland cooperates independently in the work of the Group.

Euromarkets. The trend of reserve asset diversification since 1970 is shown in provisional and hitherto unpublished estimates (pages 30-32).

The principal findings

The fact of reserve asset diversification has now been attested for the first time by an important cross section of leading central banks. And, contrary to a widespread impression, diversification has by no means been limited to oil exporters and developing countries. Although some members of the Group of Ten continue to hold their foreign exchange reserves almost exclusively in dollars, excepting for minimal working balances in other currencies, several leading industrialized countries indicate that they have been diversifying some of their own reserves into currencies other than the dollar in the past five years. Moreover, even those central banks that have not as yet begun to diversify by currencies have, like the others, begun to manage their assets more actively than before in terms of the investment instruments chosen.

The dollar, however, remains unique in retaining all the functions of a reserve currency, above all in being the world's only intervention currency for all practical purposes. It is true that the Deutschemark has come to be used for official intervention too, but as yet mainly within the European Monetary System and on a limited scale even within that. The other reserve currencies like sterling, the yen, the Swiss and French francs and the Dutch guilder represent foreign exchange assets for the holders, but they are not fully-fledged reserve currencies because they are not used directly for official intervention in the markets.

The original impetus to diversification came from the collapse of the Bretton Woods system and the floating of exchange rates. This motivated many countries to try to maintain the real value of those assets or at least to increase the return on them.* The replies further suggest that the desire to spread the exchange risk on the large accrual of reserves to raw material producers after the commodities' boom of 1972/73 and to oil producers after 1973 and 1979 contributed to reserve asset diversification. So, in the view of respondents, did the desire to match foreign liabilities and assets following the large increase in balance of payments borrowing from 1973 onwards by industrial as well as developing countries. Changing patterns of trade have played their part and so have wide fluctuations in interest rates since 1979.

The Euromarkets provided a channel for diversification from the start. More recently, other channels have been provided by the relaxation of restrictions

* "Real" dollar interest rates were negative from 1972 to 1977 and only marginally positive from 1977 to early 1980.